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THE SEVENTY-FIRST ANNUAL CONVENTION OF THE AMERICAN PHARMACEUTICAL ASSOCIATION WILL BE HELD IN ASHEVILLE, N. C.

The 1923 meetings of the American Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy will also be held in Asheville.

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WASHINGTON, D. C.

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Reporter on the Progress of Pharmacy;
Secretary of the Scientific Section, 1918–1920, and Chairman, 1920–1921;
President of the Washington, D. C., Branch of the American Pharmaceutical Association

A. G. DUMEZ

JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

VOL. XI OCTOBER, 1922 No. 10

ANDREW GROVER DUMEZ.

"We enjoy ourselves only in our work, our doing; and our best doing is our best enjoyment." The foregoing quotation seems applicable to the Reporters on the Progress of Pharmacy of the American Pharmaceutical Association—to Dr. A. G. DuMez who was elected at the Cleveland meeting to that office, and to those who have preceded him. A few months ago, in paying tribute to the late Prof. C. Lewis Diehl, Dr. H. V. Arny said that he assumed the position of Reporter as a duty to pharmacy, and in that same spirit the present Reporter consented to "carry on" the work. "Few appreciate the sacrifices made by the American Pharmaceutical Association in keeping aflame this torch* of American pharmaceutical progress;" those who render the services should have the encouragement and support of members and non-members; and few, if any, pharmacists should be in the latter class.

Andrew Grover DuMez is the son of the late A. A. DuMez—druggist at Cashton, Wisconsin, and prior to locating at the latter point a resident of Horicon, Wisconsin—where the subject of this sketch was born April 26, 1885. The courses of study in the high school of his home town were completed in 1900; for a time and until he entered the course in pharmacy at the University of Wisconsin he served a term of apprenticeship in pharmacy in the drug store of his father. His studies were continued at the university while serving during these years as Instructor in Pharmaceutical Chemistry; he received the degree of Bachelor of Science in 1907, that of Master of Science in 1910.

From 1910–1911 Dr. DuMez held the chair of chemistry in Pacific University, Oregon, and from 1911–1912 was Assistant Professor of Chemistry in Oklahoma Agricultural and Mechanical College. During the latter year he was elected to organize the School of Pharmacy of the University of the Philippines; he served as Director of the School and as a member of the Hospital Staff of the Philippine General Hospital until 1916, when he returned to the University of Wisconsin where he completed his studies and requirements for the degree of Doctor of

* The YEAR BOOK.

Pharmacy (1917). "The Galenical Oleoresins," published in the *Bulletin* of the University of Wisconsin, 288 pages (Serial No. 980, Gen. Series No. 764), was presented in fulfilling part of the requirements for the Ph.D. degree. Titles of other contributions by him to publications follow:

"The Physical and Chemical Properties of the Oleoresin of Aspidium with Respect to the Detection of Adulteration," *Philippine J. Sci.*, 8B, 523–538, 1913.

"A Criticism of the United States Pharmacopoeia with Respect to the Naming of the Compound, $C_{17}H_{21}NO_4.HBr + 3H_2O$, and with Regard to the Prescribed Tests for Its Identity and Purity,"* *Am. J. Pharm.*, 86, 339–349, 1914.

"Two Compounds of Emetine Which May Be of Service in the Treatment of Entamoebiasis," *Philippine J. Sci.*, 10B, 73–79, 1915.

"The Simulation of Disease, Drugs, Chemicals and Septic Materials Used Therefor," *Public Health Rep.*, pp. 1187–1892, 1917.

"Qualitative and Quantitative Tests for Arsphenamine and Neo-Arsphenamine" (Myers & DuMez), *Public Health Rep.*, pp. 1003–1018, 1918.

"A Contribution to the History of the Development of the Enteric Capsule," JOUR. A. PH. A., 10, 372–376, 1921.

While in the Philippines, Dr. DuMez served as a member of a committee which revised the Pharmacy and Drug Laws of these Possessions, and was also appointed to conduct an investigation of the schools and colleges of pharmacy in the Philippines. He traveled in China, Japan, the Philippines and French Indo-China, and in these countries studied the conditions of the traffic in narcotic drugs. He served as Secretary of the Rainey Committee, appointed (1918) to investigate the traffic in narcotics in the United States. Among the papers and reports relating to the subject of narcotic traffic and habituation the following are mentioned:

"Traffic in Narcotic Drugs" (Report of Special Committee of Investigation), "Special Bull. Treasury Dept.," June 1919, 129. "Increased Tolerance and Withdrawal Phenomena in Chronic Morphinism."—*J. A. M. A.*, 72, 1069–1072, 1919.

In 1917 Dr. DuMez was appointed Associate Pharmacologist, Hygienic Laboratory, U. S. Public Health Service. He has charge of compiling and editing the "Digest of Comments on the United States Pharmacopoeia and the National Formulary," and the "Digest of Laws of Poison and Habit-Forming Drugs," 1917 to date. In that capacity he succeeded the late Martin I. Wilbert. He also acts as drug expert for the Service. Besides holding membership in a number of scientific organizations, he is abstractor for *Chemical Abstracts;* member of the Revision Committee of the United States Pharmacopoeia and Chairman of the Sub-Committee on Nomenclature.

In addition to the duties assumed as Reporter on the Progress of Pharmacy, Dr. DuMez is Secretary of the Council, A. Ph. A., and of its Executive Committee.

E. G. E.

* In this paper the author presented an exhaustive review of the literature on the origin and use of the terms hyoscine and scopolamine, and criticized the official tests for identity and purity, and advocated the recognition of only *l*-scopolamine hydrobromide as official, and that a definite specific rotatory power be prescribed for it.

EDITORIAL

E. G. EBERLE, Editor 253 Bourse Bldg., PHILADELPHIA

COÖRDINATED COÖPERATIVE RESEARCH.

MUCH has been said and written about research, and it is not the purpose at this time to dilate upon it but to express satisfaction in that the effort to organize a National Conference on Pharmaceutical Research has been successful.

Several years ago the *Scientific American* in endeavoring to seek comfort from reflections upon the "valuable" lessons which the World War taught us, said editorially:

"In scientific and particularly in technical research lack of coöperation means not only needless duplication of effort, but incalculable loss through arrested development. It is often the combination of the ideas of two or more individuals that furnishes the solution of a problem. When these ideas are not brought together, they cannot combine. Hence it follows that free interchange of thought accelerates progress in altogether incalculable proportion.

"Yet a species of pardonable professional jealousy, or the fear of giving aid to a competitor in trade, has long been allowed to place obstacles in the way of such interchange of ideas. A less self-centered attitude in these matters cannot fail to bring advantage to all. The present economic situation should cause us to give most careful heed to these things."

In an editorial of last month Chairman H. V. Arny said that "an elastic conference plan has been adopted that will not only bring together all of those interested in pharmaceutical research, including those interested in the National Research Council, but will also be likely to bring about enthusiastic coöperation among research workers in pharmacy." The report of the Committee in this issue of the JOURNAL serves a larger purpose than editorial comment, which in this instance is to compliment those whose efforts have brought success. The science of pharmacy has a close relation to human life and popular interest in it is growing.

E. G. E.

ENTRANCE REQUIREMENTS OF SCHOOLS AND COLLEGES OF PHARMACY AND THEIR MATRICULANTS.

IT is very evident that the higher requirements exacted by schools and colleges of pharmacy have brought to them a larger number of students who can utilize their opportunities. There is a growing realization that the value of *preliminary* drug store experience, preparatory for the studies in a college of pharmacy, is variable; it is becoming more difficult to standardize it, and the application of the standard presents related difficulties. An increasing number now contend that

the value of experience generally gained in a "modern" drug store, as far as it applies to the study of pharmacy, is rather limited; that these years would have added more to the preliminary qualification of the prospective pharmacy student and prepared him better for a course in pharmacy, if they had been devoted to the furtherance of business and academic training. Viewpoints on and valuation of preliminary practical experience requirements differ, and it is not the purpose of this comment to discuss the question.

Greatly increased numbers are seeking enrollment within our colleges and, as a result, many fail to secure admission to the institutions of their choice. This will mean that a standard must be fixed for admittance that is based, as far as possible, not only on the educational qualifications of the student but on his desires, his conception of and purpose of education—his possibilities. "The ultimate aim of education should be the greatest possible advantage to the public and the development of the individual to his highest possibilities."

Ernst Martin Hopkins, president of Dartmouth College, recently said: "One of the greatest weaknesses of democracy is the taste for palatable untruths rather than for more nourishing but less agreeable facts." As a result of the larger number of applicants at institutions of learning some could not be admitted, and, as the aim of these institutions should be the greatest possible advantage to the public, it was necessary to use other means of selection than that of sequence in application; there followed charges which in most cases, if not all, were not founded on fact.

The same conditions as alluded to obtained at schools and colleges of pharmacy; all of the applicants could not be admitted, notwithstanding minimal educational requirements could be met by them, and standard of work maintained of the grade which these institutions consider of greatest value to the public. One school reports that a third of the freshman class had one or more years in college in addition to four years of high school work. Selection of the student body should be based, as far as possible, on who of the applicants can best utilize the opportunities of education; both moral and educational qualifications are to be considered in the selection.

It is very evident that the higher educational requirements exacted by the schools and colleges of pharmacy for the admission of students are attracting more young men and women to them who can and will advantageously utilize their education for the advancement of pharmacy and thereby be of greatest value to the public. President C. A. Dye said in his address: "The position any business or profession occupies in the mind of the public is governed by the educational, professional, business and ethical ideals of the individuals engaged in the business or profession."

"The desire for learning, the hunger for it, and a determination to satisfy that hunger will make better students and more efficient men than merely a desire to go to college because it is the thing to do." E. G. E.

SOME INTERESTING MEDICINAL PLANTS OF BOLIVIA.

BY H. H. RUSBY.

The botanical work of the Mulford Biological Exploration of 1921–22 was directed especially toward the investigation of medicinal plants, the results of which will be published from time to time, as the studies are completed. Although most of our information regarding the native uses of these plants will prove of historical interest only, a number of the subjects possess practical importance. Among these are the botanical and geographical sources of the Coto and Coccillana barks and their commercial substitutes, which form the subject of the present contribution.

My acquaintance with coto bark began in the early eighties, when my employers, Messrs. Parke, Davis & Company, listed fluidextracts of both coto and paracoto. Mr. H. A. Wetzel, our superintendent, one day brought me samples of each of these barks with instructions to investigate carefully and decide to which the respective names properly belonged. He informed me at the time that the name "paracoto" had been coined arbitrarily, for the sole purpose of distinguishing a bark that had been found in commerce under the name coto, but which was obviously distinct from, though closely similar to the real article. This statement I verified in the course of my investigations, and it is noted here in criticism of the statement that has found its way into print to the effect that the name "paracoto" was assigned because its bark is produced in the region of Para, in northeastern Brazil, an assumption that is wholly erroneous.

At the time referred to, both coto and paracoto barks were readily obtainable in our market, being imported, always, so far as I know, from Germany. All that was known of their geographical origin was comprised in the general statement that they were collected in Bolivia. On my first journey to South America, in 1885, one of my objects was to determine the exact place of production of these barks.

Nothing whatever was known as to the botanical origin of either, except that their structure, composition and properties rendered it practically certain that they belonged to the family *Lauraceae*. I was, of course, interested in solving this problem, also.

It so chanced that the nearest that I came to the coto region on that expedition was distant a good hard four or five days' journey, and I did not know this until after I had passed by, so I lost even this slim opportunity.

While in La Paz, and before starting overland, I had been presented by a Jesuit priest with a leaf and a fruit which he claimed belonged to the coto tree. This specimen I mailed to Detroit, without, as I now recall, any information concerning it. Mr. Wetzel sent it to a German university for botanical determination. They replied that the species was unknown in Germany, and could not be determined without flowers, but they suspected that it was the source of coto bark. Now that I have specimens of the coto tree, I know this supposition to be incorrect, for the leaf in question was nearly a foot long, lanceolate, and of very thick heavy texture. The fruit was like a very large, elongated acorn, much larger and more slender than those shown here as belonging to the coto tree. I have no doubt that it was a species of *Nectandra*, and I think very likely it came from the paracoto tree.

Upon my return from South America in 1887, I found the market full of spurious coto bark. Both coto and paracoto could still be obtained, but were evidently from old stock, as neither of genuine character appeared to be imported at the time. This scarcity increased until, about the beginning of the present century, it became impossible to obtain any genuine coto, though there was still some paracoto to be had. Both barks, however, must have been going to Germany, as cotoin and paracotoin were always obtainable there. I believe that Gehe & Co. were the sole importers. Between 1900 and 1920, I never saw a pound of genuine coto or paracoto imported into or for sale in the New York market. I was, however, able to obtain samples of both from Messrs. Merck & Company, in Darmstadt. In the meantime, barks purporting to be coto and paracoto, but wholly spurious, were freely sold here, and various manufacturers were offering spurious fluidextracts from them. During my examination of drugs in the Bureau of Chemistry, I rejected many importations of these spurious barks, but never saw any that was genuine, and I collected a variety of substitutes. Most of these appeared to belong to the family *Lauraceae*, but one was quite clearly far removed from this family. In the year 1920, or 1919, I received from Messrs. Denniston & Company, of La Paz and New York, a sample of genuine coto, representing a small shipment that they had for sale. I at once called at their New York office and explained the importance of scientific information regarding this tree, and asked for help in securing it. They communicated with Mr. Denniston, who was in La Paz, and secured his promise of full assistance. The finding of this tree thus became one of the prime objects of my recent travels. I visited and was entertained by Mr. Denniston while in La Paz, and my route of travel was selected partly with a view to securing information regarding coto. He gave me letters to Sr. Mostaja, of Huachi, at the head of the Beni River, whose Indians had been collectors of this drug. On arriving at Huachi, we were given excellent living quarters by Sr. Mostaja, and remained there for some time. Being in poor health, and quite unable to undertake any journeys requiring severe physical exertion, I was most fortunate in having so energetic and faithful a botanical associate as Dr. O. E. White, of the Brooklyn Botanic Garden. To him I assigned this work and explained carefully and impressively the nature of the collections and observations that were required. He made a difficult journey of several days, incurring great labor and considerable hardship, led by Indian guides, to the mountains south of Huachi, where he collected several barks and branchlets of the trees from which barks have been collected for commercial purposes under the name of coto. One of these, there known as "Coto Piquante" or "Coto Fino," appears to be the genuine coto. The others, both there known as "Coto Ordinario," are among the spurious barks that have been offered repeatedly in the United States as coto and paracoto. The real paracoto was not found, although I thought for a time that I had done so. On exhibiting Dr. White's samples to Sr. Mostaja, he expressed the opinion that we had not yet secured the real coto, and at once sent his Indians to procure it. The journey required nearly a week and his men were apparently not very faithful, for they had not returned at the time that we were obliged to leave. Conjecture as to the identity of this fourth species is scarcely profitable, but it is not improbable that it will prove to be paracoto, and I am rather expecting it to be the same that was given me by the priest in 1885.

It must be noted here that there are some indications that Sr. Mostaja is correct in believing that we have not yet received specimens of the original coto tree. Our bark is somewhat softer and more fibrous than the original and it contains two alkaloids never reported previously. On the other hand, Dr. Schneider, who is very familiar with the histology of these barks, reports the structure of this as agreeing with coto, although the cell contents differ somewhat. Moreover, there is an abundance of cotoin and its derivative in our bark. On the whole, I conclude that our bark is a form of the genuine article, and note that it is not impossible that we shall find a group of related species, comparable with that of the cinchonas. It is important to note here that the medicinal repute of coto could not fail to suffer severely as a result of the extensive use of spurious barks, extending over nearly half a century.

The study of these three specimens has been very difficult and the decisions are not free from doubt. None of them possesses flowers. Two possess fruits and very young flower-buds on the leafy twigs, while the third has leaves only. Ordinarily, the taxonomist familiar with a given family is able to refer specimens with some degree of confidence to their respective genera, on their habit and the general characters of foliage and fruit, but such is not the case with the members of the laurel family. There is a close similarity among the genera in both leaves and fruits and such differences as exist are apt to maintain among the species within a genus. Flower-dissection thus becomes a necessity. These facts apply with special force to the two genera *Nectandra* and *Ocotea*, to which the species here discussed appear to pertain. There is no single character by which a species of one genus can be distinguished from the other. This can be done only through a combination of characters, some of which belong to the flowers. Those of *Ocotea* are usually, but not always, unisexual, while those of *Nectandra* are usually, but not always, perfect. It might be assumed that even young buds could furnish clues to this structure, but the unisexual flowers of *Ocotea* retain more or less pronounced vestiges of the effete organs.

The perigone of *Nectandra* is tomentose, while that of *Ocotea* is usually glabrous. By these and other indications, I feel quite sure that the coto plant is a *Nectandra*, while one of the spurious species is an *Ocotea*. The other spurious one, represented by leaves only, I do not attempt to name. Its leaves are so closely similar to those of an undescribed species of *Acrodiclidium* collected on this exploration that for a time I thought they might be identical. Yet it is not at all likely that these leaves belong to that genus, and I am quite sure that the plant is a *Nectandra*.

With an admission of some slight doubt, therefore, I name the coto plant *Nectandra Coto*, and the spurious one with fruit, *Ocotea pseudo-coto*. These names, with descriptions, will appear in the September number of *The Bulletin of the Torrey Botanical Club*.

Dr. White has submitted the following interesting report of his discovery of these trees.

"About noon we reached our camping place, and a short distance down the slopes we found the coto trees—great, tall giants, with cinnamon-colored bark—that towered above the palms and tree ferns. The sky was cloudy, rain was close at hand, and the forest itself gave the impression that showers were a daily occurrence here. At the beginning of a trough-like valley, the ground

carpeted knee-deep in ferns and soft wringing-wet moss, these laurels, that we had come so far to see, the bark of which furnishes such valuable aids to humanity in the far-away civilized countries, produced upon me something of the same effect as though I had come to see one of the brilliant men of the world with whose books I had long been acquainted. The Indians went before us, and as we looked about in the gloomy forest—for the sky was cloudy, and a storm was approaching, and the woods were really deep in gloom—one of the Indians yelled out: "Hay aqui, senor, arto!"(Here they are, sir, in a plenty) and pointed to a group of trees from 60 to 80 feet high, large of trunk, with comparatively few branches at the top, and these mutilated by the winds and storms and other processes of time. We proceeded to cut down one of the trees which the Indians assured me, after tasting and smelling, was *Coto piquante*. While the Indians were chopping down this tree, we searched the forest for other specimens and for types of the spurious cotos. As soon as the tree was felled, we examined its top and collected the leather-like leaves, but found only inflorescences full of buds, which was very disappointing. We searched the ground around the trees for fruits, but found none, upon which we went further down the valley, scattered out, in order to find a tree in fruit or flower. Fortunately, about a quarter of a mile away, upon a steep bank, we came across another such giant, with many fruits upon the ground underneath, and some of these were fresh. I tried to get the Indians to cut this tree down, but since they have, from time immemorial, appreciated the value of coto bark as a remedy for certain of their own disorders, they showed great reluctance to do my bidding, and at last refused, explaining to me that it had taken ages to produce such a tree and that it was very valuable to them, both for its bark in their sicknesses, and for purposes of barter. I finally prevailed upon one of them to climb it, and after much effort he reached a point in its top from which he secured numerous specimens of fruits and leaves. The fruits, as we found them, recalled to mind the acorns, with brownish cups and green acorn-like fruits with whitish speckles. There appeared to be two sizes of fruit, indicating perhaps that more than one season was required for maturing the fruit, the smaller specimens representing fruit of the current season. However, this is only speculation.

"The tree which we cut down was 33 inches in circumference, six feet from the base. The bark was thin and brownish, aromatic, very *piquante*, biting the tongue like cloves after it had been in the mouth for a half-minute or so. The bark adhered closely to the wood and was rather difficult to remove. The wood was yellow and stainy, with an aromatic odor that suggested sandal wood. After the bark was removed, the wood exposed to the air turned a reddish brown. This tree had no branches up to about 50 feet, and then very few. The second tree, marked on our specimens *Coto la*, from which we secured all the fruiting specimens, was 3 feet and 9 inches in circumference at about 5 feet above the ground. This tree was from 50 to 60 feet high.

"One of the peculiar facts about the coto forest was the apparent lack of young trees. Even under the trees or in the vicinity where fruit was plentiful, we were unable to find any young specimens. Perhaps this was because we were unable to recognize them, but the Indians were just as much in the dark in regard to this as we were.

"The cinnamon-colored bark of these two *Coto piquante* trees was indistinguishable as far as gross features were concerned, from *Coto ordinario*. At first the Indians showed us what evidently is a spurious coto for *Coto ordinario*, and this, in our specimens, is labelled *Coto 2*. The bark of this is very thick, brownish as in *Coto 1* and *Coto 1-a*, but peels from the wood surface very easily. The wood of this spurious coto is light yellow or almost white when the bark is removed, and exposure to air did not turn it brown There is no satiny luster and as it dries it turns reddish white, and as the heart is approached, the wood becomes of a deeper red, while the heart-wood of *C. piquante* is licorice-root yellow. The two species are of about the same height and occur in the same association, often side by side. The leaves of this spurious type are smaller and differ in many small characteristics from those of *Coto 1* or *Coto 1-a*, especially in the coloring of the under side. In *C. piquante*, the leaves are lighter green to almost whitish green on the under side, while those of *Coto 2* or the spurious coto are dark green. The young twigs of *C. piquante* have brownish cinnamon-colored scurf, while on the young twigs of the spurious coto the outer covering is inconspicuously scurfy green. Flower buds of both had reached about the same stage of maturity. The bark of *Coto 2* is not particularly aromatic even when fresh, and not at all so when dry. Specimens of the wood of both the spurious coto and the *C. piquante* were obtained.

"Later, the Indians decided that a tree from which we had obtained leaf specimens, and which are marked *Coto 3*, was the real *Coto ordinario*, and this is the conclusion we ourselves came

to as the barks of *C. piquante* and *C. ordinario* (or *Coto 3*) are very similar, both being aromatic, but that of *Coto 3* is not in the least piquante. The wood of *Coto 3* is yellow, like that *Coto 1* and *Coto 1-a*. We obtained no fruits from *Coto 3*, but the Indians say the fruits are the same, and I found one or two under the tree that indicated this. The height of *Coto 3* is very similar to the others.

"As the specimens stand then, *Coto 1* and *Coto 1-a* are *Coto piquante*, most of the bark being obtained from *Coto 1*, and all the fruiting specimens were obtained from *Coto 1-a*, with a small specimen of bark. *Coto 2* is a spurious coto, while *Coto 3* is *Coto ordinario*, bark being obtained from both these latter, and wood specimens from *Coto 2*. Wood specimens of *C. piquante* were also obtained from another specimen of this tree that had somewhat seasoned, having been chopped down by the Indians on former expeditions. All three types of trees are characteristic of the wet, rain-forest region on the north slope of these hog-back ridges, and even in this region they are not particularly plentiful. They are all near the top of the ridge which runs east and west, the ridge itself being roughly a thousand feet higher than the Mission, possibly 2500 to 3000 feet elevation above the sea. The rain-forest association occurs only on the north side and at the top of the high ridge. It consists of many palm species, trees, ground, and climbing ferns, mosses upon the ground and upon the tree trunks. Orchids and bromeliads are common epiphytes on the trees, and many of the ferns here are epiphytic. The woods are full of fallen leaves."

Cocillana or Guapi Bark and Its Substitutes.

The history of cocillana as a drug is largely a history of my own work in connection with it. Its facts have been published but may be recapitulated here.

Early in the year 1886, while on the upper slopes of the eastern Andes of Bolivia, I received reports of the aboriginal use of a powerful enetico-cathartic drug that was poisonous in overdoses. It was named to me as cocillana, but I have since come to know that this name was quite erroneous and not applied to the drug outside of the locality where I first learned of it. At another place I was told that it was called Upas and that people might be killed by sleeping under its shade. This was obviously a mere ignorant confusion with the oriential upas, and has been entirely ignored. After introducing the drug to use in the United States, and when engaged in securing further supplies, I learned that it was known generally in the region of its use under the name Guapi or Huapi, and on my last journey, I found it generally known farther to the eastward as Trompillo. The latter name has never appeared commercially, nor has the name Cocillana, except through the original error. The drug is commonly known, both in Bolivia and in importations here, only as Guapi, and this name should be substituted for that of cocillana in medical literature, with the latter name as a synonym.

The first specimens of the tree that I actually encountered were found in Guanai, a village on the Mapiri River. It is a matter of great historical and practical importance that the herbarium specimens of the tree, from which the species was named and described, and the bark that was originally used in medicine and on which the medicinal properties of the drug have been established, came from the self-same tree. Since these original specimens, both of bark and herbarium material, are preserved at the New York College of Pharmacy and at the New York Botanical Garden, we have an absolute means of authentication in the case of this drug that is very rare, if not quite unique in materia medica.

The herbarium specimens were originally studied by Dr. N. L. Britton, who regarded them as representing a new genus, which he described under the name *Sycocarpus*, with which he associated my name as discoverer, calling the plant *S. Rusbyi*. In my subsequent studies, I found that the tree belongs to the genus

Guarea and, in conformity with the rules of nomenclature, transferred the specific name, so that the proper name of the plant becomes *G. Rusbyi* (Britton) Rusby. The parenthetical name should not be omitted, since otherwise it would indicate that I had applied my own name to a species, an obviously improper procedure.

For some years, all the cocillana bark used in this country and in Europe was obtained by my own collectors and imported by myself, and all lots were known to me to be of the same kind and quality as the original. I continued the importation of this bark for some years. About the year 1908, the first shipment of spurious bark made its appearance here, and was rejected by myself as pharmacognosist at the New York Laboratory of the Bureau of Chemistry. I at once sought information regarding the botanical source of this article, and received from Mr. Miguel Bang, my Bolivian collector, some fruits and leaf fragments of the tree yielding it. This proved to be another species of *Guarea* and, having satisfied myself that it was undescribed, I proposed for it the name *G. Bangii*, in commemoration of its discoverer. The specimen was so fragmentary that a good description could not be drawn from it, so that publication was withheld. This species is represented in the collections made on my recent trip, so that I have now published the name and described the species. These specimens are here exhibited as "Guapi B." Here, again, the bark and herbarium material have been taken from the salf-same tree.

Up to the present time, I have never seen any other bark offered in commerce under the name of Guapi or Cocillana except this one and the genuine, but I have found on my recent journey two other species of *Guarea*, besides a tree belonging to the *Lauraceae*, growing in the Guapi-collecting region, and all there known as Guapi or Trompillo. It is apparent, therefore, that bark from any or all of these is liable to make its appearance in market as guapi and cocillana. I therefore collected barks and herbarium specimens of all of them for purposes of description. Bark specimens of another species of *Guarea* were also collected but were lost in transit. From the herbarium specimens of this species I have determined that it is known to science and it has been described as a new species.

We have thus to consider four bark specimens, accompanied by herbarium material, as follows:

Guapi or Cocillana "A," the original and genuine article, from *G. Rusbyi*.

Guapi or Cocillana "B," the spurious article that has occurred in commerce from *G. Bangii*.

Guapi or Cocillana "C," also spurious, pertaining to a large tree of the laurel family, almost undoubtedly a species of *Nectandra*.

Guapi or Cocillana "D," also spurious, and pertaining to a species of *Guarea* which cannot be determined, as it is without either flowers or fruit.

In addition to these we have a fifth species, represented by good herbarium material, but no bark, which I have described under the name *Guarea alba-rosea*.

In the extreme eastern part of Bolivia, I found an interesting species of *Guarea*, planted as a handsome shade tree along a street. Specimens were secured and are here shown.* It is probably undescribed, but I have not had time to complete my search. Should its bark ever enter commerce, it might prove quite troublesome, since its appearance on the tree is closely similar to that of the genuine Guapi.

* Scientific Section meeting, A. Ph. A., Cleveland, Ohio.

The genus *Guarea* comprises about one hundred species, distributed throughout tropical America. The plants are either shrubs or trees, some of the latter attaining the size of a large apple tree. The leaves are equally pinnate, with a bud at the top of the rachis, between the last pair of leaflets, and are usually large. The number of leaflets is rather constant within the species, rarely varying by more than one or two pairs. In size and form the leaflets are very variable, so that these characters are of little service in determining the species, unless we have a long series of specimens for examination. Neither are the fruit characters very useful for specific distinction, in most cases, as they vary greatly in size with maturity, and the form varies considerably with the stage of development. When young, they are fig-shaped or pear-shaped. Occasionally they retain this form, but usually become nearly spherical as they mature. It is thus in the flower characters that we must look for our constant marks of specific distinction, and dissection is necessary in determining them. The filaments of the stamens are coherent into a cup or tube and the anthers are concealed within this tube and below its margin, which may be either truncate or crenate. It is probably from this stamen tube that the natives have derived their local name "trompillo," meaning "a little trumpel." It is the variation in the shape and size of this cup and the character of its margin and the place of location of the anthers, with their form and size and method of attachment, which gives us our best characters for specific distinction. Good characters are also found in the size and form of the anthers and in their attachment, and in the form of the calyx and its relation as to size and shape with the corolla. Moreover, the calyx and corolla are valvate in some species, imbricate in others. The shape, size and character of the ovary and style are also quite characteristic.

HISTOLOGY OF COCILLANA AND SUBSTITUTE BARKS.

BY C. W. BALLARD.

Commercial supplies of cocillana have been frequently adulterated not only with allied barks from non-official species of *Guarea* but also with various foreign barks. The botanical identity of these substitutes has been more or less in doubt and is one of the problems which has been partially solved by the Mulford Expedition. The four samples described in this monograph were furnished by Dr. H. H. Rusby and were collected by him during his travels in the Amazon region while in charge of the exploration. The material includes specimens of genuine cocillana (*Guarea Rusbyi*) and three substitute barks, namely—*Guarea Bangii*, an unidentified *Guarea* and a species of *Nectandra*. *Guarea Bangii* resembles true cocillana more closely than the other two substitutes but the differences between it and the genuine article are sufficiently great to render its identification a simple matter. The other substitutes differ greatly from cocillana in appearance and physical characters.

GENERAL DESCRIPTIONS.

Cocillana (*Guarea Rusbyi*).—This bark occurs as flattened and slightly curved fragments more or less mixed with thinner strips of wood. The fragments range in width up to 80 millimeters and in length up to 250 millimeters. The thickness

is between 5 and 15 millimeters thus exceeding the maximum stated in National Formulary IV. The outer surface is marked by fairly deep longitudinal fissures which are irregular in their course. The external surface often shows lichens which are gray to greenish gray in color and which mask the natural light brown color of the cork. The inner surface is yellowish brown to pinkish brown in color and shows coarse longitudinal striations often with projecting fibers. The fracture is rather soft excepting that the innermost layers are fibrous and splintering, showing numerous projecting fibers at the break. A view of the fractured surface shows that the cork or outer bark region is comparatively thin, comprising about one-fourth or one-third of the entire specimen. The powdered material has a slight odor but it is hardly characteristic. The taste is astringent and slightly nauseating.

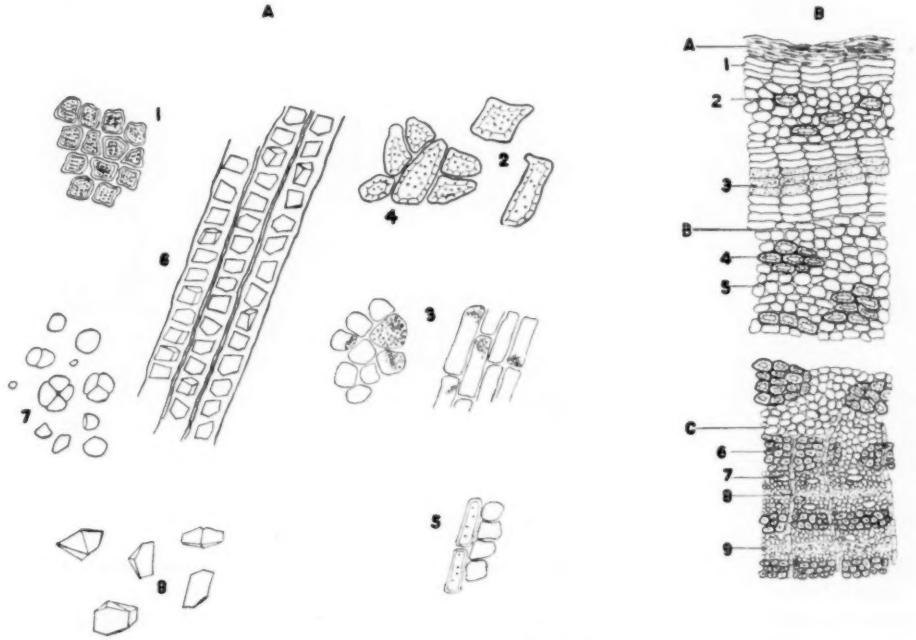
Substitute Cocillana (*Guarea Bangii*).—This bark occurs as flattened strips, the samples at hand being up to 800 millimeters in length, 50 millimeters in width and not exceeding 5 millimeters in thickness. The outer surface is roughened showing a few prominent longitudinal ridges and fissures. Due to overgrowth of the cork the ridges are usually accompanied by fissures. Quantities of white, grayish and greenish lichens may be present and may cover the natural reddish brown color of the cork. The inner surface is yellowish brown in color and similar in appearance to that of *Guarea Rusbyi*. The fracture is tougher and much more fibrous than in the genuine cocillana and shows projecting splinters or fibers throughout the entire bark. The odor is non-characteristic and the taste is slightly astringent.

Substitute Cocillana (*Guarea, Unidentified Species*).—This sample of bark is in the form of flattened and curved fragments up to 250 millimeters in length, 80 millimeters in width and not exceeding 5 millimeters in thickness. The outer surface is granular in appearance with occasional longitudinal fissures and numerous grayish to grayish green lichens. Where not obscured by lichens the external color of the bark is a pinkish brown. The inner surface is reddish brown with numerous coarse yellowish striae. The fracture varies from even to uneven and is clean with the possible exception of a few large fiber groups toward the inner surface. The fractured surface shows numerous tangentially arranged groups of yellowish fibers in several layers and upon fracture the bark tends to split along these layers into veneer-like fragments. The odor is non-characteristic and the taste is slightly astringent.

Substitute Cocillana (*Nectandra, Unidentified Species*).—This bark occurs as slightly curved fragments. The samples submitted range up to 200 millimeters in length, 50 millimeters in width and not exceeding 3 millimeters in thickness. The outer surface shows a very few transverse ridges and numerous prominent raised lenticels of circular form. Where the surface is not covered with grayish or white lichens, the color is a dull grayish brown. The inner surface is medium brown in color and although showing numerous irregular fine ridges is not rough and fibrous as are the *Guareas*. The fracture is fairly even and practically non-fibrous. The fractured surface shows a very thin layer of cork and numerous isolated yellowish fiber groups are apparent in the inner portions of the specimen. The odor is faintly aromatic and camphoraceous. The taste is mildly camphoraceous.

HISTOLOGICAL DESCRIPTIONS.

Cocillana (*Guarea Rusbyi*).—Owing to the friable nature of this bark it is extremely difficult to prepare sections. Plate B represents a composite drawing made from several sections. The outer surface of transverse sections may show several more or less detached layers of periderm or secondary cork. This periderm consists of partially obliterated cork cells, isolated stone cells and parenchymatic elements. A second layer of well-developed cork cells usually occurs beneath the periderm. The middle bark consists largely of parenchyma filled with starch but bands or groups of thick-walled stone cells also occur in this region. The inner bark shows large groups of yellow bast fibers many of which contain crystals. The medullary rays are wavy, one cell in width and poorly defined except for their dark color. The rays extend through the fiber groups and cross the strips of dark-colored parenchymatic cells located in this portion of the specimen. Scattered among the dark parenchyma cells are larger thin-walled elements which probably serve as secretion cells.



Cocillana (*Guarea Rusbyi*).

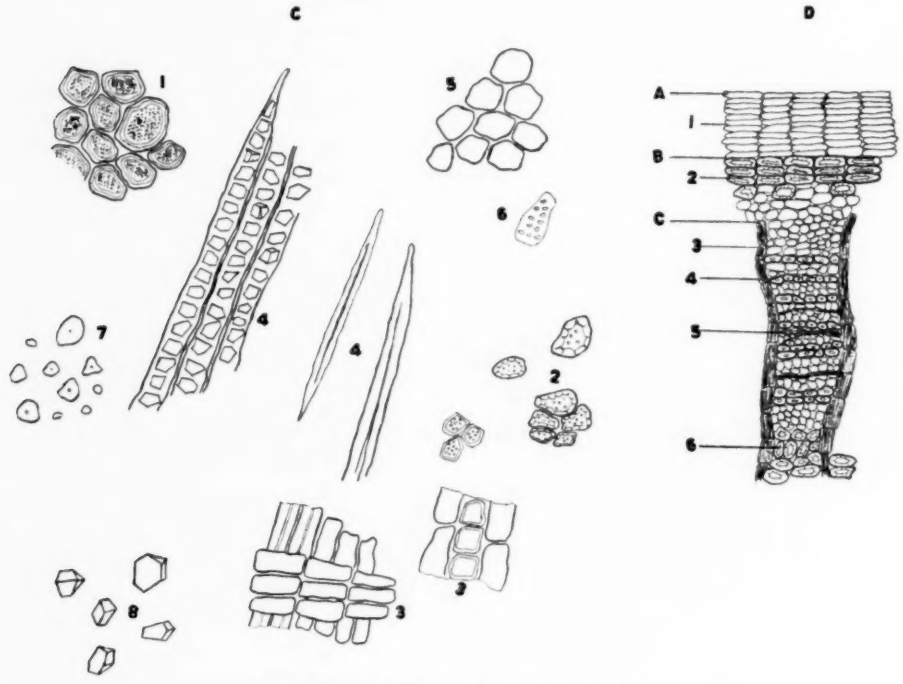
Plate A.—1, cork; 2–4, stone cells; 3, parenchyma with starch; 5, medullary rays; 6, crystal-bearing fibers; 7, starch; 8 crystals.

Plate B.—1, cork; 2–4, stone cells; 3, cork; 5 bark parenchyma; 6, fiber bundles; 7, secretion cells; 8, medullary rays; 9, secretion channels; A, outer bark; B, middle bark; C, inner bark.

Crystal-bearing fibers and stone cells are very abundant in the powdered bark. The stone cells are yellowish in color, thick walled, porous and angled to irregular in form. Parenchyma is apparent in both transverse and longitudinal views and dark-colored cork masses are present in fair amount. The prismatic crystals occur in the fibers and free in the field ranging in size between 10 and 25 microns.

Starch occurs in single and compound grains composed of two, three or four. The single grains range from 5 to 10 microns and the compound from 10 to 25 microns. The powder is a grayish brown color.

Substitute Cocillana (*Guarea Bangii*).—Transverse sections of this bark show a well-developed cork composed of about twelve layers of clear, rectangular, thin-walled, light brown cells. The middle bark region is comparatively narrow and consists largely of rectangular, thick-walled porous stone cells arranged in several regular layers. The inner bark forms the greater portion of the specimen and shows medullary rays, bast fibers, stone cell groups and bark parenchyma. The rays appear as wavy lines of dark brownish cells and are but one cell in width.



Substitute Cocillana (*Guarea Bangii*).

Plate C.—1, cork; 2, stone cells; 3, medullary rays; 4, fibers; 5, bark parenchyma; 6, porous parenchyma; 7, starch; 8, crystals.

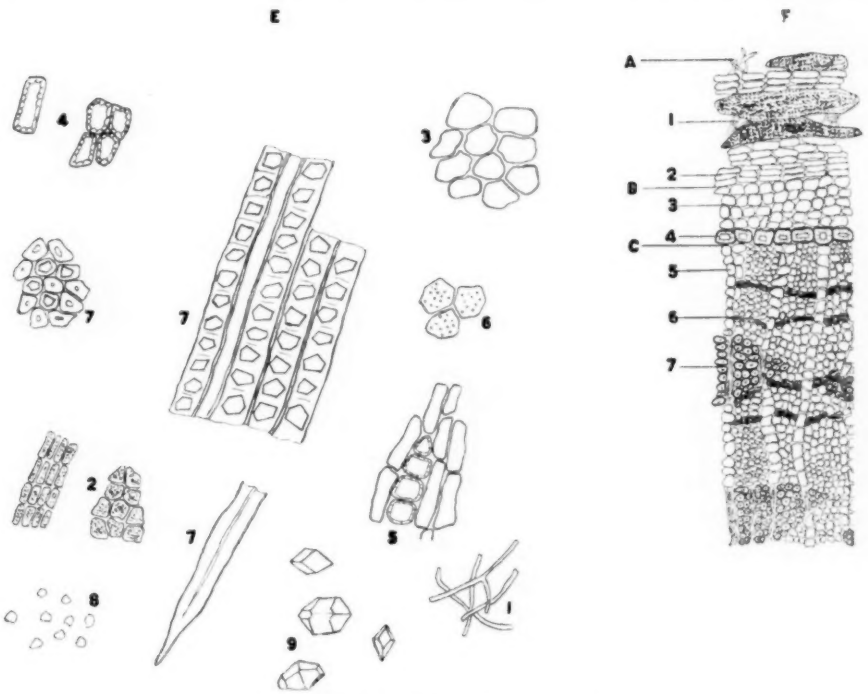
Plate D.—1, cork; 2–6, stone cells; 3, medullary rays; 4, fibers; 5, intercellular channels; A, outer bark; B, middle bark; C, inner bark.

The bast fibers are light yellow and occur in bands one or two cells in width and extending between adjacent lines of ray cells. The stone cells in this portion of the bark are represented by a few large groups which may extend over several rays and which are traversed by lines indicating the course of the rays which intersect the group. The bark parenchyma is of the usual type and shows numerous large anastomosing intercellular spaces filled with a brownish content.

The powdered material shows masses of crystal-bearing fibers together with isolated and broken fibers of the non-porous type. The yellowish stone cells occur singly for the most part and are fewer and smaller than those in genuine

cocillana. The medullary rays and cork cells show up well in powdered material. Parenchyma of the usual type together with small amounts of a distinctly porous form may be distinguished. The crystals are of the prismatic type and are not as numerous or as large as in *Guarea Rusbyi*. These crystals range between 10 and 15 microns in size. Starch is rather scarce and occurs in single grains ranging between 5 and 8 microns in size. The powder is a light chocolate-brown.

Substitute Cocillana (*Guarea, Unidentified Species*).—The outer surface of transverse sections of this bark occasionally shows several more or less detached layers of periderm or secondary cork. Lichens are apparent both on the outer surface of this periderm and in the spaces between it and the underlying cork layers.



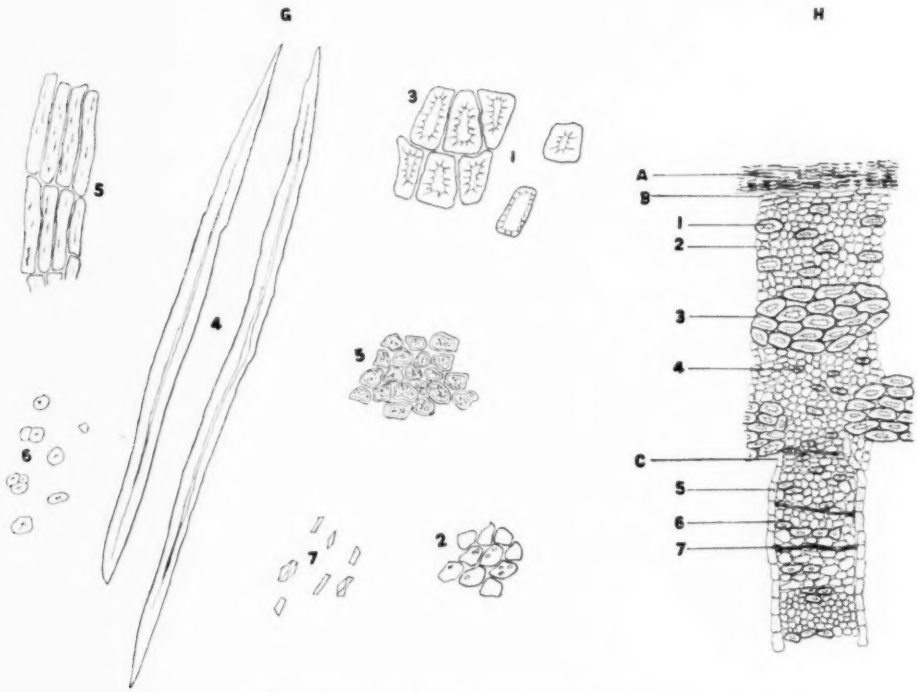
Substitute Cocillana (*Guarea spec.*).

Plate E.—1, lichen filaments; 2, cork; 3, bark parenchyma; 4, stone cells; 5, medullary rays; 6, porous parenchyma; 7, fibers; 8, starch; 9, crystals.

Plate F.—1, lichen growths; 2, cork; 3, bark parenchyma; 4, stone cells; 5, medullary rays; 6, intercellular channels; 7, fiber groups· A, outer bark; B, middle bark; C, inner bark.

The periderm cells are very dark colored and cell structure is almost indistinguishable. The cork cells are light colored, radially elongated and form a band of about five layers of cells in thickness. The middle bark region is comparatively narrow and is separated from the inner bark by an almost uninterrupted single layer of thick-walled rectangular stone cells. The inner bark shows large elliptical groups of yellowish bast fibers. The medullary rays, one cell in width, are clearly distinguished in the fiber groups but appear to be merged with the bark parenchyma in the other parts of the bark. Crystals are clearly apparent in many of the fibers.

The most prominent elements in the powder are the short crystal-bearing fibers and the numerous large prismatic crystals. Practically all of the fibers are in broken condition and a majority of them contain crystals. The majority of the stone cells are of a thin-walled porous type and they are comparatively few in number. Fragments of lichen tissues and porous parenchyma are occasionally present. Cork tissues and bark parenchyma containing crystals also occur in fair amounts. The prismatic crystals range between 15 and 35 microns in size and show many variations in form. Starch occurs sparingly and in single circular or angled grains averaging about 5 microns in size. The powder is a pinkish brown color.



Substitute Cocillana (*Nectandra spec.*).

Plate G.—1, 3, stone cells; 2, parenchyma with starch; 4, fibers; 5, cork; 6, starch; 7, crystals.
Plate H.—1, 3, stone cells; 2, bark parenchyma; 4, 6, fibers; 5, medullary rays; 7, intercellular channels; A, outer bark; B, middle bark; C, inner bark.

Substitute Cocillana (*Nectandra, Unidentified Species*).—The outer surface of transverse sections of this bark shows a thin band composed of four or five layers of cork cells. Owing to the dark color of this cork layer, the individual cells can only be distinguished with difficulty. The middle bark region forms the greater portion of the specimen. The stone cells of the middle bark occur in large compact masses and also as isolated cells scattered in the bark parenchyma. Bast fibers also occur in the middle bark but are more plentiful in the inner bark. The inner bark is traversed by medullary rays one or two cells in width and extending in an almost straight course. The ray cells are much darker in color than the

surrounding tissues. Bands of bast fibers together with parenchyma and sieve elements occur between the lines of ray cells. Large thin-walled cells possibly concerned with the secretion of the aromatic constituent also occur in this part of the bark.

The most striking element in the powder is the fibrous tissue, and the fibers occur singly, are non-porous, non-striated and with a slightly roughened outer wall. The fibers are very long and measurements show many reaching one millimeter in length. The stone cells usually occur in groups and are yellowish in color. The individual stone cells are angled to irregular in form and are porous. Both thick- and thin-walled types occur although the former predominate. The cork and parenchymatic tissues are of types usual in barks and are not especially characteristic. The starch occurs in single and compound grains up to three, the single grains ranging between 5 and 10 microns. The crystals are small, narrow prisms not exceeding 15 microns in length and about one-third as broad. The powder is a dull brown color.

PHARMACOGNOSY LABORATORY,
COLLEGE OF PHARMACY,
COLUMBIA UNIVERSITY.

MISCELLANEOUS CHEMICAL PAPERS.*

THE ACTION OF LIGHT ON SOLUBLE FERRIC PHOSPHATE.

BY N. R. MUELLER.†

The action of light on so-called Soluble Ferric Phosphate of the U. S. Pharmacopoeia (1900) and on the preparations into which it enters, has given rise to a number of disturbances that interfere more or less seriously with prescription practice. One of the most unsatisfactory classes of preparations in this respect are the elixirs into which this and similar compounds enter. Because of the unsatisfactory character of these, the Elixir of the Phosphates of Iron, Quinine and Strychnine was prepared a year ago[1] according to a number of formulas. Practically all of the formulas employed were modifications of an original formula, suggested for the purpose of overcoming the unsatisfactory character of the elixir when made according to the original formula. Nevertheless, practically all of the elixirs thus prepared, which differed more or less from each other, agreed in this particular that they were alike unsatisfactory, especially when exposed to light.

Inasmuch as the complexity of the elixir precludes the proper diagnosis of the case, it seemed fruitless to continue the study of improvement along the empirical lines heretofore pursued. It seemed much more rational to ascertain which ingredient or which combination of ingredients is affected by light. Leaving out the sugar and alcohol for the present, the first series of preliminary tests was made with aqueous solutions of soluble ferric phosphate. In the second series of preliminary

* From the laboratory of Edward Kremers.

† Abstract of thesis submitted for the degree of Bachelor of Science (Pharmacy Course), University of Wisconsin, 1915.

tests various combinations of chemicals that enter into the composition of the soluble ferric phosphate were tried out. The first series of tests revealed that, whatever might be the effect of other ingredients of elixirs of this class, the fundamental difficulty might be looked for in the mixture of compounds known as soluble ferric phosphate. The second series revealed that at least part of the basal difficulties lies in the action of sunlight on citric acid in the presence of ferric iron. In how far the case has been diagnosed by these preliminary experiments will be explained in the following report.

First Series.

Materials.—Four samples of soluble ferric phosphate were used: one preparation from Merck, one from Squibb, and two preparations made in this laboratory.

1. The commercial preparation of Merck consisted of brittle scales. It was an old preparation and contained 14.26 percent of iron.[2]

2. The commercial preparation of Squibb consisted of thin, bright green, transparent scales. It was more recent and assayed 11.53 percent of iron, whereas the U. S. P. demands 12 percent.

3. This preparation was kept in form of a solution and from it No. 4 was prepared by scaling. Both of these preparations were made from electrolytic iron, the purest iron available. For the preparation of the ferrous sulphate, C. P. sulphuric acid and distilled water were used. The directions given in the U. S. Dispensatory, 9th revision, p. 511, were followed. About 3 Kg. of this pure sulphate were prepared as stock for the experiments hereinafter recorded.

Inasmuch as the U. S. Pharmacopoeia, 8th decennial revision, gives no directions for the preparation of soluble ferric phosphate, those given by W. A. Puckner[3] were followed, with the exception that the ferric sulphate was prepared according to the U. S. P., 8th revision, p. 264. Whereas Puckner suggests the use of potassium chlorate as oxidizing agent, the U. S. P. directs the use of nitric acid. About sixteen hours of heating were required to concentrate the solution of soluble ferric phosphate to the required weight (500 Gm.). A portion of this solution was kept as such, the remainder was scaled, the ratio of the two products being about 2:1. This solution assayed 6.38 percent of iron.

4. As already indicated, this scale preparation was obtained from the above solution (No. 3). Hence it was the most recent of the three scale preparations used. It assayed 10.96 percent of iron, whereas the U. S. P. demands 12 percent.

Exposure of Solutions of Soluble Ferric Phosphate to Light.—From the scale materials described (Nos. 1, 2 and 4) five percent aqueous solutions were prepared, of the solution (No. 3) twice the amount was taken in order to obtain a dilution of similar strength. In order to ascertain whether the heat of solution caused a difference in the behavior of the finished solution to light, solution was effected both at room temperature (about 20°) and with a "gentle heat."[4] The following solutions, 100 cc of each, were prepared in triplicate (A, B and C):

I. Own scale preparation (No. 4) at room temperature.
II. Own scale preparation (No. 4) with the aid of gentle heat.
III. Own solution (No. 3) at room temperature.
IV. Merck's scale preparation (No. 1) at room temperature.
V. Merck's scale preparation (No. 1) with the aid of "gentle heat."
VI. Squibb's scale preparation (No. 2) at room temperature.

Of these solutions, 100 cc each were transferred in triplicate to 100-cc glass-stoppered cylinders; one set was exposed to direct sunlight, the second set was exposed to diffused daylight in the same room, and the third set was kept in a dark cupboard, also in the same room. Observations were made every twenty-four hours. The tabulated detailed results may be consulted in the thesis deposited in the university library.

The data recorded in the table referred to reveal that the samples in direct sunlight began to decompose very soon after they were exposed, while the samples in diffused light became slightly darker only after the lapse of several days. The samples in the dark remained quite stable except for a mould which began to grow upon the solution of the soluble ferric phosphate sample about four days after it had been prepared. After about two months moulds also developed upon other solutions kept in the dark, and also upon the solution of soluble ferric phosphate.

As manifestation of decomposition in the samples exposed to sunlight the evolution of a gas was observed. The evolution began almost immediately after the samples were set out, and had completely ceased in about five days. The sample made with Squibb's Soluble Ferric Phosphate (No. VI) and the sample of our own salt made with the aid of heat (No. II) began to throw down a precipitate, while some gas was still being given off. The other samples began to throw down a precipitate about four days after gas had ceased to be evolved. Precipitation began, in most cases, with the formation of a "scum" on the top of the solution. After two weeks' exposure, the decomposition was completed in all but our own samples of salt (No. II) and of the solution made in the cold (No. I). These two samples showed no signs of precipitation after two weeks, but they were completely decomposed at the end of a month.

The color of the precipitate varied from a dark green to a pure white. The upper layer of the white precipitate had a green color. The solutions varied from a light brown, in the case of samples with a dark precipitate, through a milky to a very clear solution in the cases of a light green to white precipitate. Bottles having loosely fitting stoppers had a dark precipitate and a dark solution showing that the action of the air causes a change which presumably is of the nature of an oxidation.

Three samples each of solutions similar to No. II and No. VI were exposed under conditions similar to those of the original samples. The same action and results were observed in these check samples as in their originals.

Precipitate.—An endeavor was made to separate the fine white precipitate from sample No. II by means of filtering under a hydrogen cap. As soon as the precipitate was exposed, it turned to a blue-green color. The precipitate was dried in a desiccator filled with hydrogen.

Gas.—Three nitrometers were prepared by charging them with a solution of 1 Gm. of scale salt in 15 cc of water. The solutions, made with Nos. 1, 2 and 4, were kept in the nitrometer tube over chloroform. Observations were made twice daily and the results are shown in the following table:

Sample.	No of cc of gas evolved.						No. of cc after 2 months' exposure.
No. 1	0.0	0.0	0.0	0.05	0.05	0.10	8.8
No. 2	0.0	0.7	3.4	4.2	4.4	4.4	50+ (capacity of tube, 50 cc)
No. 4	0.0	0.6	1.9	2.8	3.0	3.5	2.93

It will be noticed that the fresh salts (Nos. 2 and 4) began to evolve large amounts of gas very soon after exposure, while the old sample (No. 1) did not evolve much gas, even after the lapse of several months.

The gas from another set of nitrometers was collected in an aspirator bottle. A few cc of the gas passed into freshly prepared lime water, gave a decided cloudiness, indicating the presence of a large amount of carbon dioxide. Other gases may be present but have not been identified.

Pure citric acid solutions 5 Gm. in 100 cc placed in nitrometers in direct sunlight did not decompose or evolve gas, although they were exposed for several months.

Solubility of Ferric Hydroxide in the Three Sodium Ortho-phosphates.—Three tests were made using ferric hydroxide (0.6 Gm.) and a different sodium ortho-phosphate, mono-, di-, and tri- (2 Gm.), in each case. The proportions were the same as in the scale salt. Enough water to make 100 cc was added.

After standing a day at room temperature, the excess of ferric hydroxide was filtered off, and the filtrate, which was clear and colorless, was tested for iron with potassium sulphocyanate T. S., hydrogen sulphide T. S., hydrogen sulphide gas, potassium ferrocyanide T. S.

No test for iron was given by any of the reagents in any of the samples.

From these tests it may be concluded that no iron is present in the solutions, and that none of the three sodium ortho-phosphates have any solvent or combining action with the ferric hydroxide in an aqueous medium at room temperature.

The Action of Sunlight upon Several Different Solutions.—The following solutions and partial solutions or mixtures were prepared and held over chloroform to 50 cc nitrometers.

I. $Fe(OH)_3$, from 1.56 Gm. $FeSO_4.7H_2O$ [0.6 Gm. $Fe(OH)_3$].
II. Citric acid, $C_6H_8O_7.H_2O$, 1.2 Gm.
III. $Na_2HPO_4.12H_2O$, 2.0 Gm
IV. $Fe(OH)_3$, 0.6 Gm.; $C_6H_8O_7.H_2O$, 1.2 gm.
V. $Fe(OH)_3$, 0.6 Gm.; $Na_2HPO_4.12H_2O$, 2.0 Gm.
VI. $C_6H_8O_7.H_2O$, 1.2 Gm.; $Na_2HPO_4.12H_2O$, 2.0 Gm.
VII. $Fe(OH)_3$, 0.6 Gm.; $C_6H_8O_7.H_2O$, 1.2 Gm.; $Na_2HPO_4.12H_2O$, 2.0 Gm.

In each case enough water was used to make 100 cc of solution or mixture.

The gasometers were charged with 25 cc of the above solutions or mixtures, and were then exposed to sunlight in a south window of the laboratory. Readings were taken every day.

For the details the original thesis may be consulted.

There appeared to be no change and no gas was evolved in the following experiments:

I. $Fe(OH)_3$, 0.15 Gm., in 25 cc water.
II. $C_7H_8O_6.H_2O$, 0.3 Gm., in 25 cc water.
III. $Na_2HPO_4.12H_2O$, 0.5 Gm., in 25 cc water.
V. $Fe(OH)_3$, 0.15 Gm., and Na_2HPO_4, 0.5 Gm., in 25 cc water.
VI. $Na_2HPO_4.12H_2O$, 0.5 Gm., and $C_6H_8O_7.H_2O$, 0.3 Gm., in 25 cc water.

A decided change and decomposition took place in experiments Nos. IV and VII.

IV. $Fe(OH)_3$, 0.15 Gm., and $C_6H_8O_7.H_2O$, 0.3 Gm., in 25 cc water.

Evolution of gas began 24 hours after the nitrometer had been exposed to sunlight. The rate of evolution was proportional to the intensity of the light; that is, on cloudy and dark days, gas evolution almost ceased, while on bright sunny days gas evolution was almost continuous. After 10 days' exposure, about 24 cc of gas had been collected, and at this point the reaction appeared to be completed, since at the end of 22 days there were still only about 24 cc of gas, but this was a period of very little sunshine, which may account for the constancy of the volume of gas. After exposure for 22 days another evolution of gas took place, but was accompanied by an accident resulting in the loss of the experiment. During the first few days of the exposure the solution was almost colorless, and the precipitate had a brown color. After several weeks' exposure the solution had a greenish yellow color and the precipitate seemed to be partially changed to perhaps reduced iron (a black precipitate heavier than chloroform being formed).

VII. $Fe(OH)_3$, 0.15 Gm.; $C_6H_8O_7.H_2O$, 0.3 Gm.; and Na_2HPO_4, 0.5 Gm., in 25 cc of water.

A partial solution of $Fe(OH)_3$ resulted. The color of the solution was a light green. The remainder of the $Fe(OH)_3$ went to the bottom as a precipitate and a day or two later several green layers of varying intensity were formed at the bottom of the solution. The evolution of gas began about 24 hours after exposure to sunlight. The evolution of gas again appeared to be proportional to the intensity of the light. At the end of 10 days about 8.3 cc of gas had been formed. Then ensued about a week of cloudy weather with very little sunlight, and it was found that the volume of the gas in the top of the gasometer remained constant. At the end of 20 days there were about 8.5 cc of gas, and the decomposition and evolution of gas was apparently complete. At the end of 30 days there were 14 cc of gas in the nitrometer, but this last increase in volume may have been due to the decomposition of the chloroform. Mercurous chloride again appeared to have been formed with the mercury in the trap as in the case of Experiment IV ($Fe(OH)_3$ and citric acid). The solution was practically colorless, and the precipitate had a light brown color.

In comparing the amount of gas evolved in Experiment IV and in Experiment VII, it will be seen that there was about $^1/_3$ as much evolved in VII as in IV, although the amounts of the ingredients were the same except that Na_2HPO_4 (0.5 Gm.) was added in Experiment VII. A conclusion can naturally be drawn, that the presence of Na_2HPO_4 retards the decomposition and the evolution of gas.

EXPOSURE OF A SOLUTION (OR MIXTURE) OF CITRIC ACID AND FERRIC HYDROXIDE TO SUNLIGHT.

This experiment was a check on No. IV. The solution was held in the nitrometer over chloroform which was displaced through a mercury trap, as the gas was formed. Two nitrometers were charged with ferric hydroxide 0.15 Gm., citric acid 0.3 Gm. and water sufficient to make 25 cc.

Table showing amount of gas in cc evolved:

	12/14/14.	12/15/14.	12/16/14.	12/17/14.	1/11/15.
I.	0.0	2.0	4.2	7.0	22.3
II.	0.0	1.5	3.0	5.0	20.2

After about one month's exposure there had been 22.3 and 20.2 cc, respectively, of gas evolved in each nitrometer. Variations in temperature caused the gas

formed to contract, and air was admitted through the mercury trap, therefore the resulting gas volumes are contaminated with some air.

ACTION OF LIGHT UPON AN AQUEOUS SOLUTION OF CITRIC ACID AND FERROUS HYDROXIDE.

The ferrous hydroxide was prepared by treating a ferrous sulphate solution with ammonia water in molecular quantities and washing the resulting precipitate by decantation. The precipitate was protected from the air as much as possible, but some ferric hydroxide was formed. The product was assayed by converting the ferrous hydroxide to ferric chloride and then determining the amount of ferric iron according to the U. S. P. method for ferric chloride. (U. S. P., 8th revision, p. 152.)

Two nitrometers were charged with ferrous hydroxide (0.15 Gm.) and citric acid solution (0.3 Gm. in 25 cc H_2O) held over chloroform.

A clear light green solution resulted. The nitrometers were exposed to sunlight for about a month, but no gas was formed. The solution became colorless and clear. Apparently there was no decomposition as in the case of ferric hydroxide and citric acid.

REFERENCES.

1. B. Chilson, U. W. thesis, 1914. (Under the direction of Dr. Langenhan.)
2. The iron assay was carried out according to the U. S. P., 8th revision, p. 161.
3. Proc. A. Ph. A., 45, p. 231.
4. About 38° according to the U. S. P., p. LIII.

THE DIAGNOSIS AND TREATMENT OF HAY FEVER.*

BY IVOR GRIFFITH.

Newer developments in the field of hay fever diagnosis and therapeusis have completely eclipsed the theories and practices indulged in when this field was first cultivated. This, of course, is the general turn of affairs when any new medical idea is promulgated, for it is only by experience and experiment that the true value of medical discoveries may be obtained.

Formerly it was held that hay fever or pollinosis was due to the unusual sensitiveness, or idiosyncrasy, of the sufferer to the pollen of a vast variety of plants out of Nature's garden. But Nature's garden is expansive, and the old conception of diagnosis meant that a large analytical botanical chart was followed in order to establish the sensitiveness of the person under examination. As time went on, however, it was found that a real majority of patients responded uniformly only to a small class of pollen proteins. Then, again, when closer study was made of pollination methods, it developed that comparatively few plants use the simplest way of broadcasting their pollen grains; namely, by trusting it to the wind. And it is wind-borne pollen that is responsible for most hay fever infections.

So we found, as time went on, that the diagnosis and treatment of hay fever causes became more simplified, and particularly so by the brilliant conception of a "grouping" of the pollen extracts. Investigation proved conclusively that patients who are sensitive to pollens may be "botanically" classified according to plant families.

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* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Cleveland meeting, 1922.

This botanical relationship of the pollens has even been carried so far as to conceive that patients who are sensitive to more than one pollen of the same family may be treated (or desensitized) by using a pollen extract belonging to only one member of that family, the one chosen being generally the one affording the most pronounced reaction in the diagnostic test.

Scheppergrell, the pioneer in this field of investigation, reduces the principal hay fever pollens into four groups as follows:

Group 1—Gramineae (the grasses).
" 2—Ambrosiaceae (the ragweeds).
" 3—Chenopodiaceae (the chenopods).
" 4—Artemesias (the wormwoods).

This is a natural botanical grouping; Scheppergrell further summarizes the gross characteristics of hay fever plants as follows:

(1) They are wind pollinated.
(2) They are prolific.
(3) The individual plants are inconspicuous as to color and odor, and pollen formation is very active.

Now, then, the simplified character of present methods of hay fever diagnosis and treatment may be exemplified thus. If a given person is sensitive to corn pollen or red top or orchard grass, he may be desensitized with the most prolific member of that group (the gramineae), namely, timothy. This class or group is generally termed the spring group, and is responsible for the early hay fever. Thus again ragweed will desensitize not only against ragweeds but also against closely related plants of the same group such as cockleburs, golden rod and red root. Sometimes, however, in the case of multiple sensitiveness it is necessary to use, in addition to the class or group representative, the other members of this group to which the patient displays insensitiveness. This is not resorted to until it is established that the patient is not deriving any benefit from treatment with the group representative.

The botanical grouping referred to has displaced the older seasonal grouping, and it is no longer considered good practice to label the treatment products as Fall, Mixed Fall, Spring or Summer extracts.

Group 1 and Group 2 are the more common offenders. Group 3 includes a heterogeneous collection of plants of wide distribution, the commonest being the docks and the amaranths and the true chenopods which are important contributing agents in the perennial hay fever cases. Group 4 includes the several species of the prolific wormwoods which are the chief causes of hay fever in the Pacific and Rocky Mountain states.

In preparing these agents for the market, the pharmaceutical houses have used several methods, each manufacturer selecting a special procedure and insisting that the chosen procedure is best. There is, therefore, a wide disparity in the potency and dependability of pollen proteins. It is our experience, however, in using these pollen extracts in the laboratory, that the acetone-insoluble pollen of the alkalinized aqueous extract of the sifted dried pollen yields best results for both diagnosis and treatment. The protein nitrogen content is high and they are more uniform and stable. Knowledge of the protein nitrogen content[1] is valuable since

[1] Noon establishes the following factor for all pollen proteins: 0.001 = 1 pollen unit.

it is necessary to use this datum in order to establish the pollen unit. A word or two in regard to the conduct of the test and the mode of treatment.

DIAGNOSTIC TESTS.

The technic of the cutaneous test, which is by far the preferable, is as follows: Cleanse patient's forearm with alcohol and rinse well with sterile water. With a sharp needle make a small linear scratch about $^1/_8$ inch long on the skin of the forearm and avoid drawing blood. Place a small drop of a $N/100$ NaOH solution on the scarified area. Over this dust some of the pollen extract and rub gently but thoroughly into the scarified area. This is repeated at 2-inch linear intervals with the other extracts. It is always necessary to run a control scarification, using only the $N/100$ NaOH. The results are recorded 20 to 30 minutes after applying the tests.

Positive reactions vary in their intensity and no reaction is considered positive that is not definitely larger than the control reaction. A marked positive reaction consists of a definite urticarial wheal with a surrounding area of erythema. A moderately positive reaction shows a similar picture, except that the characteristics are not so pronounced. A mild reaction shows very little of the wheal but a distinct area of erythema. The protein or proteins giving reactions are usually the cause of the symptoms. After ascertaining the cause in this manner, the treatment is next considered.

PROPHYLACTIC TREATMENT.

Prophylactic treatment should begin 4–6 weeks before the attack is scheduled, and from 12–20 injections given. As soon as the specific pollen occurs in the atmosphere, however, the dose must be reduced, as the patient is additionally exposed to atmospheric pollen.

The injecting solution is prepared from the pollen extract, so that a cc represents about 100 units (calculated on the basis of N times 6.25 content). These solutions may be procured from the manufacturers and so may all of these products, both diagnostic as well as the treatment agent.

The accepted scheme of dosage is as follows:

Dose.	No. of pollen units.	Dose.	No. of pollen units.
1	12.5	6	125
2	25	7	150
3	50	8	175
4	75	9	200
5	100	10	225
		11 to 20	250

In conclusion our experience has been that a large percentage of hay fever infection can be modified, if not cured, by the pollen extract treatment.

LABORATORY, STETSON HOSPITAL,
PHILADELPHIA, PA.

EXPERIMENTS ON IMPROVING THE KEEPING QUALITIES OF CHALK MIXTURE.*

BY B. FANTUS AND C. M. SNOW.

The present formula for chalk mixture antedates the days of antisepsis. Originally known as *Julapium Cretaceum* of Bates, we find a formula for it in the "Proceedings of the Committee of Physicians to Thoroughly Reform the London Pharmacopoeia" (1744). This "Julapium" contained practically the same ingredients chalk mixture has to-day with the exception of the cinnamon oil; this addition, which not only made the mixture more pleasant but also increased its keeping qualities, we find for the first time in the "Edinburgh New Dispensatory" (1786), in which this preparation appears under the name of "*Potio Cretacea.*" The Pharmacopoeia of the Massachusetts Medical Association (1808) contains practically the same formula under the name "*Mistura Carbonatis Calcis;*" and this was taken over with some modification into the U. S. P. of 1820. Since then the formula has appeared in successive editions of the U. S. P., practically unmodified until 1880, when, after numerous unsuccessful attempts to improve the keeping qualities of the chalk mixture, the *Compound Chalk Powder* was introduced, which is permanent, to be used in the extemporaneous preparation of chalk mixture. This has eliminated any excuse on the part of the pharmacist to dispense any other than a freshly prepared mixture. It has not, however, done away with the possibility that the mixture might ferment while kept unduly long in the patient's house, particularly during the hot summer months when this medicine is most especially used. The mixture is furthermore objectionable from a medical point of view because it is illogical for the physician to administer sugar and acacia as ingredients of a medicine employed in fermentative diarrhea, in which condition he generally is careful to exclude all carbohydrate from the diet.

We therefore undertook experiments to determine whether it might be possible to improve the keeping qualities of the chalk mixture by eliminating its fermentable ingredients and using saccharin instead of sugar for sweetening. The quantity of saccharin required for this purpose is so minute as to be surely unobjectionable from the standpoint of toxicity. The following formula yielded a preparation that seemed to meet the requirements:

Prepared chalk	6.00 Gm.
Saccharin	0.02 Gm.
Cinnamon water	40.00 cc
Water, to make	100.00 cc

We got up a sufficient number of samples of this preparation to send to twenty-five of the leading pediatrists of this country, with request for comments, and were favored with replies from eighteen. All of those who were using chalk mixture were in sympathy with the proposed modification of the formula, excepting two. One of them objected to the absence of the suspending agent, as he employs the chalk mixture for the suspension of insoluble bodies like bismuth subcarbonate. This, it might be noted, is not really desirable, as the bismuth and acacia form on prolonged standing a cement-like sediment difficult to reincorporate in the mixture.

* Read before Section on Practical Pharmacy and Dispensing, A. PH. A., Cleveland meeting, 1922.

Another practitioner made the surprising statement that he "had not experienced the fermentation referred to." This led us to study the keeping qualities of chalk mixture. We found that the mixture really does not decompose very rapidly; and, as the acid formed by the fermentation is neutralized by the chalk, the only change evident on standing is a progressive lessening and final loss of sweetness. There is no doubt, however, that the preparation now official contains good culture media for microörganisms, and is to that extent unhygienic.

Much to our surprise, we discovered that the saccharin-containing mixture was not as permanent as we had hoped. Especially when kept exposed to sunlight for quite some time, it developed an offensive odor reminding one somewhat of hydrogen sulphide or of illuminating gas, with progressive diminution and final loss of cinnamon flavor. Protected against light it does not decompose readily. As, however, the manner of keeping the mixture cannot be controlled after it has left the pharmacist's hands, the formula is not a satisfactory one.

There is little doubt that some other less reactive flavoring oil could be found that might be used instead of the cinnamon and would yield a permanent preparation. We have prepared saccharin-sweetened chalk mixture with anise water, fennel water and peppermint water, and so far have not noted any decomposition. The time for observation has not yet been sufficiently long to enable us to vouch for the absolute permanence of these preparations. However, we have little doubt that, should the use of saccharin as a sweetening agent be desired, a suitable flavoring could be found.

CONCLUSIONS.

1. The now official chalk mixture is objectionable because of its carbohydrate content.

2. A mixture from which the fermentable ingredients are eliminated, and in which saccharin is used as a sweetening agent is objectionable because of a decomposition that occurs, especially under the influence of sunlight, which results in the substitution of an offensive flavor for that of cinnamon.

3. Some other less reactive flavoring oil than that of cinnamon would have to be used if saccharin were to be employed as the sweetening agent.

PHARMACY LABORATORY
OF THE UNIVERSITY OF ILLINOIS.

SOME INCOMPATIBILITIES OF ASPIRIN.*

BY EDSEL A. RUDDIMAN.

In the report of the Scientific Section of the American Drug Manufacturers' Association for the present year is given a list of some incompatibilities, or supposed incompatibilities, of Aspirin. Some of these have been chosen for experimentation.

Acetylsalicylic acid is a compound which is broken up by a large number of agents. Water is perhaps the most common. The usual method of estimating the amount of decomposition is to determine the amount of free salicylic acid. The method of testing is to dissolve a given weight of aspirin in a little alcohol and then dilute with water to a certain volume and add a solution of ammonium ferric alum.

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The coloration is in proportion to the free salicylic acid. "New and Nonofficial Remedies" allows not over 0.1 percent of free salicylic acid. In making this test the color should be observed at once as it increases decidedly in a few minutes. This indicates the quickness with which aspirin hydrolyzes. In fact, in making compressed tablets, if water is used to granulate the powder there is an increase in the free salicylic acid.

The statement has been made in pharmaceutical journals that a permanent solution of aspirin can be made by dissolving it in a solution of an alkali citrate. The citrate aids solution, possibly by the formation of the alkali acetylsalicylate and citric acid, but it does not prevent hydrolysis. The violet color with a ferric solution may not show at first, because citric acid and citrates interfere, but after standing for a time the color will be developed.

In the following experiments aspirin was triturated dry in a mortar with an equal weight of various chemicals. Small amounts of aspirin with citric acid, oxalic acid, tannic acid, and tartaric acid do not give a perceptible odor of acetic acid for a month, and cannot be tested for salicylic acid with an iron solution because the acids interfere with the color. There may, however, be some decomposition, and probably is. It is not improbable that acids in drug extracts may cause some hydrolysis in the course of time.

Sodium citrate seems to cause some decomposition. Although the test for salicylic acid with iron is negative, the odor of acetic acid is quite marked after standing for a couple of weeks.

Potassium acetate when triturated with aspirin gives a slightly sticky powder which has a dirty white color. This becomes granular and acquires quite a perceptible odor of acetic acid in a day or two. An iron solution gives a deep violet color.

Sodium phosphate when rubbed with aspirin gives a soft mass, almost liquid. The acetylsalicylic acid may combine with one atom of sodium, breaking up the molecule and liberating the water of crystallization. A marked odor of acetic acid is soon noticed and iron solution gives a violet color.

Borax acts similarly to sodium phosphate. It gives a mass and an odor of acetic acid and a violet color with ferric salt. Using dried borax, a mass is not obtained.

When lead acetate and aspirin are rubbed together the mixture becomes slightly damp at once and a strong odor of acetic acid is noticed. The reaction proceeds until a mass is formed which, on standing, separates into liquid and solid portions.

Hexamethylenamine when first triturated with aspirin gives a slightly damp powder which becomes sticky and, in a few days, forms a greenish yellow almost liquid mass. A slight odor of formaldehyde is noticed and, later, a marked disagreeable odor is produced. A solution of a ferric salt gives a deep violet color.

Antipyrine gives a sticky mass at once when rubbed in a mortar with aspirin and in a few minutes when mixed on paper with a spatula. The mass assumes a yellowish color which becomes darker and forms a hard crystalline solid. It gives a deep violet with an iron salt.

Phenol gives a liquid but the following apparently cause no change: Salol, menthol, thymol, phenacetin, ammonium chloride, phenolphthalein, magnesium sulphate.

LABORATORY OF
JOHN T. MILLIKEN & CO.,
ST. LOUIS.

MEDICINAL CHARCOAL.*

BY RALPH L. CALVERT.

The question has been asked, "Is charcoal, when in the moist condition, of any therapeutic value?" This is a question very difficult to answer and impossible to prove by chemical experiments.

Let us first consider the various charcoals and their physical properties. Let us take the two types of wood charcoal, that from soft wood and conversely that from hard wood, and examine a sample of each under the compound microscope. The hard wood charcoal shows a granular structure, while the soft wood exhibits a fibrous structure. No matter how fine the particles of each, the same difference of structure will be apparent. For internal administration we would therefore prefer the soft wood charcoal, not that there is any inherent virtue in soft wood more than there might be in hard wood, but because it is more palatable.

The United States Pharmacopoeia describes charcoal as prepared from soft wood and finely powdered, and states that it should contain not more than 7.5 percent of ash. Samples from various sources have been examined by the writer and found to contain from three to twelve percent of ash. But the ash content really has nothing to do with the medicinal properties of charcoal. The two essential factors are palatability and absorption. The latter term is probably more correctly called adsorption, since it is the disappearance of immense quantities of a gas into small particles of charcoal, caused by the adhesion of the gases to the very extensive internal surfaces which the charcoal possesses.

We can prove by chemical manipulation that dry charcoal will absorb gases to a very high percentage. But charcoal when administered internally becomes moist by the presence of liquids in the stomach and also by the natural secretion of the gastric fluids. Now after admixture of the charcoal with these fluids, will it absorb gases due to fermentation or putrefaction of the stomach contents?

An apparatus was set up as follows:

A cylindrical jar (fitted with a small opening at the bottom to allow admission of air) filled with sodium-calcium hydrate, connected through a thistle tube with stopcock to a flask, which leads through a bulb condenser to a U-tube partly filled with concentrated sulphuric acid, and connected to another U-tube, containing calcium chloride, the latter tube leading to another U-tube, the first half of tube containing calcium chloride and the other half containing copper sulphate on powdered pumice. These series of U-tubes as described were connected to a Midvale absorption tube containing sodium hydrate asbestos, according to the formula by J. B. Stetser. This Midvale tube is fitted with an entrance and exit tube, the latter leading to a U-tube the first half containing calcium chloride and the other half containing sodium-calcium hydrate and connected to a suction pump.

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This apparatus was devised according to the description given by the Association of Official Agricultural Chemists and is used to determine carbon dioxide quantitatively. The purpose of sodium-calcium hydrate, sulphuric acid, calcium chloride and copper sulphate is to hold back carbon dioxide, moisture and sulphides, respectively. The apparatus is allowed to run to obtain a constant and then the Midvale tube weighed. A weighed quantity of anhydrous sodium carbonate is introduced into the flask, and dilute sulphuric acid added through the thistle tube. After effervescence ceases, heat the contents of the flask to boiling.

With the above apparatus experiments were conducted to determine the amount of carbon dioxide taken up by a measured quantity of water. Then a weighed quantity of charcoal was mixed with a measured quantity of water and the same manipulation carried on as above.

In this way by subtracting the result thus obtained from the calculated amount of carbon dioxide liberated we obtain the amount absorbed by the moist charcoal. Less than one percent of carbon dioxide was absorbed by moist charcoal according to the results obtained by a series of tests.

Further investigation proved that charcoal inhibits fermentation. Two hundred mils of a 2% glucose solution were mixed with $^1/_2$ yeast cake, and thirty mils of this added to each of 4 fermentation tubes.

After fermentation had started 0.2, 0.5, and 1.0 Gm. of charcoal were added to three of the tubes, respectively. The fourth tube was used as a blank. At the end of three hours the tube containing 0.2 Gm. of charcoal had a lower reading than the blank, showing that it had slowed the process of fermentation. In the case of the other two tubes, the amount of charcoal added was too great and settled in the neck of the tubes thus preventing a correct reading.

The experiments as above stated would seem to answer the question that "moist charcoal has therapeutic value." Yet we must consider that carbon dioxide alone is not the only gas evidenced in fermentation of the stomach contents. We must also consider that although charcoal inhibits fermentation in a test-tube it may not do the same in the stomach. It has been stated that charcoal prevents the growth of microörganisms by depriving them of their normal amount of moisture. But charcoal administered for that purpose may be saturated with moisture before it reaches its intended field of work. It has also been said that charcoal is a good antidote for phenol, eliminating it through the intestines rather than through the kidneys. This is undoubtedly true with small amounts of phenol but in potent doses it may not be so.

For many years charcoal has been used with supposedly good success, and in summing up the evidence the writer is of the opinion that "moist charcoal is of therapeutic value."

Department of Theoretical Pharmacy,
Philadelphia College of Pharmacy and Science.

VARIANCE IN POWDERED EXTRACTS.*

BY ELMER H. HESSLER.

To the majority of pharmacists this subject will probably seem trivial, but to the manufacturing pharmacist who specializes in the manufacture of tablets and capsules it is of the utmost importance.

A solid extract should represent the activity of the drug from which it is prepared. It should contain every principle of the drug excepting only the inert matter consisting mostly of cellulose. To insure such a product much care must be exercised in using a proper menstruum. A powdered extract should be the exact counterpart of a solid extract except that all moisture is removed and replaced by some inert diluent.

For the sake of convenience this subject of "Variance in Powdered Extracts" should be divided into

1. Variance in physical appearance.
2. Variance in drug strength.
3. Variance in menstruum used.

Variance in physical appearance consists of difference in the fineness of the powder and difference in color.

In producing a powdered extract the addition of such inert materials as milk sugar, starch, cane sugar, powdered licorice root, magnesium carbonate, magnesium oxide, lycopodium, and powdered marc from the drug are permissible as diluents but unless these substances are clearly mentioned on the label and of the desired degree of fineness it is very evident that two manufacturers' products will be very different even though from a therapeutic standpoint the two products may be of equal potency.

The evaporation of the percolate of course influences the final color of the extract, depending on the degree of caramelization, due to the heat employed. The vacuum process is the only one that should be used as otherwise no definite color will result. Some manufacturers resort to the addition of added artificial color to maintain a color standard. This pertains usually to extracts which should be colored green and the practice cannot be too strongly condemned.

Some definite system should be followed in the powdering and diluting of powdered extracts, especially when intended for tablet and capsule manufacture. Working formulas for tablets and capsules must be constantly changed on account of these physical differences so that the finished tablet or capsule may always be uniform in color and also in order to produce a granulation which will compress properly.

Variance in drug strength has been fairly well taken care of inasmuch as most manufacturers specify drug strength as 1 to 2, 1 to 3, 1 to 4, and so on. This drug strength is usually determined by the amount of soluble constituents in the particular drug. Some unscrupulous manufacturers, however, use standards different from those established by custom and furnish lower drug strength extracts. It is well to insist on labels stating drug strengths and also to compare them with the established ratios. Those extracts which are official and which have official

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assayed strengths are very few and while these standards are a good thing they do not actually insure a standard extract at all times. An extract may have added alkaloid to bring it up to standard and be very deficient in other extractive which is not assayable but which is, nevertheless, an active part of the drug.

Probably the most important factor in the production of uniform powdered extracts is the menstruum used. Some manufacturers will decide on a selling price for an extract and then make the menstruum fit this figure. It is only fair, however, to state that very few manufacturers of this type exist and can be usually picked out by their uniformly low price lists, many of the prices being evidence in themselves that either the product is not up to standard or that the manufacturer is selling at a loss. The latter is not usually the case.

The product produced by different menstruums acts very differently in the process of granulating a tablet mixture and consequently plays havoc with established working formulas.

The writer does not believe that all powdered extracts should be made official but manufacturers should specify on their labels:

1. Drug strength (assayed strength if possible).
2. Menstruum used.
3. Diluent used.
4. Fineness of powder.

DURET'S SOLUTION IN HOSPITAL PRACTICE.*

BY CARL F. DYNA.

I have been requested to write a paper of interest to the Section on Practical Pharmacy and Dispensing, more particularly, I suppose, to Hospital Pharmacists. But, inasmuch as the time remaining is rather short, I will content myself by calling your attention to a hypochlorite solution used in the Southern California State Hospital. This institution cares for some 2500 unfortunates, including the average percentage of chronics, and bed patients with their attendant troubles such as bed sores, gangrenous ulcers, skin abrasions, etc. A few years ago, when the papers were full of articles reporting the wonderful results obtained with the use of chlorine solutions of various kinds in the treatment of infected wounds and lacerations, I came across a formula in a number of our JOURNAL (A. PH. A.), a modification of the usual procedure, suggested by a French physician, Dr. Duret, in which he replaced the sodium salt used with magnesium, this doing away entirely with any chance of the irritating caustic action which would happen (and did in the early days) owing to the presence of free NaOH in the preparation when made in a hurry and not properly neutralized. The formula appealed to me and was tried out here with the result that we have used no other solution since, whenever chlorine irrigation has been indicated. Here is his modification:

Chlorinated lime (30% Cl)	112 grams
Magnesium sulphate	72.8 grams
Water	4 liters

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Triturate the chlorinated lime to a smooth mixture with the water and add the $MgSO_4$ crystals to this. Allow the interaction to take place at ordinary temperature, with frequent stirring. When the reaction is completed, usually in five or six hours, filter. In actual practice I have been in the habit of using three times the amount of solids. After complete precipitation and filtration, ascertain the amount of available chlorine present by the U. S. P. method and standardize the solution to contain 0.5% of nascent Cl and it is ready for use.

When you consider the simplicity of the whole process and the good results obtained (equal to any produced by the Carrel-Dakin Solution), the positive absence of any irritant, as any $Mg(OH)_2$ which might remain in the preparation has a mild stimulating effect of its own on the epithelial cells, I trust that you will agree with me that it has been well worth while calling your attention to *Duret's* Solution again.

SOUTHERN CALIFORNIA STATE HOSPITAL,
PATTON, CALIFORNIA.

THE GREAT NEED FOR COMMERCIAL TRAINING.*

BY H. S. NOEL.

A learned professor in an eastern school of pharmacy remarked to his class in microscopy not so many years ago that it behooved each individual taking the course to pay strict attention to this subject because, after graduation, when the dream of the future came into realization and it became necessary to use the microscope to identify starches in crude drugs, his teachings would prove their value. Those of us who had spent some five or ten years in the drug business before going to school doubted the sincerity of the worthy professor. Those who had little or no experience took his remarks seriously.

It is interesting to note that there is constantly being heard, whenever pharmacists gather together, an undercurrent of discussion about the time when pharmacy will again come into its own. Only a month or so ago a prominent member of the American Pharmaceutical Association read a paper at a state meeting in which the whole trend of thought was bent strongly to the near future when professional recognition would be given to pharmacy. One hears on every hand talk of raising prerequisites, increasing the years of study, granting of higher degrees and classifying places of business, until the writer confesses that he is beginning to feel very much like the Irish woman who, on seeing her boy marching out of step down the street in a military parade, remarked: "And everybody's out of step but me own boy Danny."

The merchandising expert of one of our great metropolitan newspapers recently made the remark that the grocery business was in a sadly demoralized state, due to the fact that there are more stores than needed, in some cities as high as one to each twenty-two families. It is his impression that conditions will be better at some future time and standards will be raised because the chain groceries are training men to become merchandisers and managers with the idea of opening new stores and having skilled men to run them. Instead of staying with the chain store,

* An address before the Section on Commercial Interests, A. Ph. A., Cleveland meeting, 1922.

however, these men will eventually go into business for themselves and thus will conditions slowly improve.

It would be interesting to take a poll of the classes in our schools of pharmacy and to learn at first hand what actuates our young men and women in attending college and what their plans are for the future. I venture the opinion, after close observation and numerous talks with students and proprietors, that a very large proportion of the men and women in the drug business are in it primarily to make money, to attain independence, to safeguard old age and to build a competence.

It is a serious question as to whether our schools of pharmacy are doing their duty by students in not making it possible for them to go out into the business world better fitted to practice their profession. Truly, pharmacy itself is a profession. The schools, however, are training and teaching students in lines of endeavor that are a pitifully small part of the work they expect to engage in.

The Harvard Institute of Business Research, much quoted in the last few years, investigated the businesses of 187 stores ranging in sales from less than $10,000 to those over $100,000. The largest number of stores did volumes of between $40,000 and $50,000. Eighty-five druggists furnished figures on prescription filling in proportion to the percentage of total sales. The lowest figure was 10 percent, the highest 45 percent. Most interesting, however, is the fact that the common figure was 10 percent. The sales of proprietary medicines reached as high as 67 percent in some stores. The common figure was 22 percent. The prescription business, together with proprietary medicines, commonly amounted to only about one-third of the total sales.

Commenting on this, A. M. Burroughs adds the thought that druggists have still another favorite way of losing profit that is rightfully theirs, and that is in charging for prescriptions. A large proportion of the druggists I have met and talked with do not know how to base profits or to figure overhead expense and turnover.

A respectable business man is not only an asset to the community in which he lives and does business, but I maintain that he commands greater respect by far than a down-at-the-heel professional man—give him whatever title you please. The fact that he is a good business man, instead of detracting from his professional standing, will, I maintain, be a great asset to him.

As never before, business is becoming more and more a highly respected calling, and with good reason. It takes no small amount of training and merchandising skill to conduct business successfully to-day. Truth in advertising, nationally advertised merchandise and highly competitive markets are weeding out the cheats, liars and incompetents. Most unfortunate, however, is the fact that a business man may be honest, may be actuated wholeheartedly by a desire to do right, by a desire to enjoy prestige and to command the respect of his fellow citizens, but his business incompetency bars his progress to the higher levels, and that holds true despite college degrees and professional skill. One condemns the cheat and the liar, but pities the incompetent.

Is it unreasonable to suppose that hair nets, bathing suits, phonographs and à la carte lunches would be economic necessities as side-lines if there were enough legitimate drug business to test the capacity of stores? What does the average college of pharmacy graduate know about advertising, selling, mark-ups, etc.,

when he leaves college? What equipment has he other than training as a pharmacist that enables him to go out and apply economic laws to his profession? What training, in fact, does his college course give him to assist him in building a good prescription business?

Such authority as Bradstreet reports that failures in business are naturally inclined to place the blame on causes beyond control, yet Bradstreet says that in 1918 eighty-six percent of the business failures could be attributed to personal responsibility. Leading all other causes was incompetence, followed by inexperience, lack of capital and unwise credits. The writer is not unmindful of the fact that this report was not applied to the drug business in particular, yet figures on other lines of business will show that essentially the same fundamentals apply to practically all lines of retail endeavor. Your grocer, hardware dealer, shoe retailer and jeweler have never taken a course in their callings.

It may safely be said that physicians as a class are better business men than formerly, yet physicians have little to sell that is tangible. The same can be said of engineers, lawyers, teachers, dentists, and so on down. In each profession business training is an asset, even though the profession has nothing to sell but a service. On the other hand, the pharmacist buys, sells, and deals altogether in tangible commodities. His professional skill is an adjunct only. A large part of his success indeed depends much more on his ability as a merchandiser than upon his training as a pharmacist. Basically, the pharmacist will be most successful in proportion to his ability to buy, advertise, sell and manage. After all, there is nothing in the most Simon-pure professionalism that does not call for a degree of commercialism and would not be the better for it.

There are in the United States approximately 49,000 drug stores, yet almost half of them are rated at less than $2,000 by commercial agencies. Less than 25 percent are rated between $2,000 and $5,000 and only 17 percent between $5,000 and $10,000. Only 8 percent have credit ratings of $20,000 or over.

That such a condition continues to exist is largely the fault of well-meaning schools of pharmacy that go on teaching the same subjects year after year and giving practically the same training to their students that obtained in 1890 when drug-store items numbered 2700 instead of 46,000 as they do to-day.

What student can afford to attend a school of pharmacy requiring three years or more of study for a degree with the prospect of going out into the commercial world and demanding of a proprietor a salary commensurate with his training and skill, when he knows that the owner of the business requires only 10 percent or less of his time at the prescription counter? To the drug-store proprietor the clerk is an investment; he is paid in proportion to what he brings in returns. How discouraging it would have been to a graduate in pharmacy to have overheard a remark made to me by the proprietor of one of the biggest independent stores in the country only a month ago. Standing in his front store he pointed out a young man at the prescription counter busily engaged in compounding. He said, "See that chap up there? I'm paying him $30.00 a week. It's all he is worth to me, yet he cannot seem to understand why I do not increase his salary, since he knows that I'm paying that man over there behind the sundries counter $45.00 a week. This last chap is a salesman, a merchandiser. That boy up there has been trained in a school of pharmacy to be a prescription man. He has spent three years in

college while this other chap was working behind my soda fountain." Both are bright boys, yet this retailer says he is paying the first all he earns and more, and in the same breath adds that there is no limit for the second man. What is the answer?

I have been told by college professors that our universities have no time for commercial courses, that this is a field that is adequately covered by business colleges. Nothing is more fallacious. It is not bookkeeping that our students need; it is courses in economics. Our bigger universities are finding courses in business administration popular, just as courses in advertising and journalism have prospered as part of the curricula of many colleges.

A college student approached the writer a few months ago at the conclusion of a lecture on economics of retailing. He asked if he might come to Indianapolis after graduation and spend a day in the interests of a better knowledge of the drug business. Said he: "My father died a few years ago and my uncle is running my father's store until I can get registered. I'm concluding my third year at the university and supposed I was getting along fine. After hearing you talk to-night on buying, selling, turnover, overhead expense, etc., I have come to the realization that I'm going to take charge of a business that I virtually know nothing about. I'm afraid of the prospect. Most of all I want to be successful in business. How shall I go about learning how it is done?"

I heartily agree with our present methods of teaching pharmacy. I would not be misunderstood in regard to what is being taught. It is what is not being done and what should be done that is the basis of this argument. I know of certain members of teaching staffs in our schools of pharmacy that are unalterably opposed to teaching courses in commercial pharmacy. Some of them have never spent a day behind a drug-store counter and many of those who have had retail experience have forgotten that times have changed.

I listened to the president of a university tell the members of a state association recently of plans for better college-trained pharmacists. I listened to the applause and noted carefully the rising vote of thanks accorded this man of letters whose life had been spent with books and theories and whose words of wisdom, however sincere, in my opinion fell far short of the opportunity that his school had in doing a real constructive, lasting good for pharmacy. I wondered if those present realized that higher courses and advanced teaching meant higher salaried clerks, no better equipped for the work at hand than those of less technical training.

Is pharmacy to continue to delude itself into thinking that the time will come when the learned apothecary will again come into his own? We think and plan in terms of higher technical training, forgetting that a recent investigation showed that out of thirty druggists interviewed seven had never taken an inventory, and one of these was heard to remark that he had started to once but "never again." Eight of thirty reckoned profits on costs instead of selling price. Twelve of thirty charged salaries for themselves in the expense account. Where the other eighteen hoped to secure their salaries is doubtful. Presumably, they were expected to come out of profits. It is a difficult matter to find any two druggists who agree on what it costs to do business.

It is a pleasure to note that some of the more progressive schools are teaching commercial pharmacy, and it is safe to say that the graduates of these schools will make their presence felt in the drug business.

Let us keep up the standard of entrance requirements to schools of pharmacy. Let us continue to instruct our students in the subjects now being taught, but with a due consideration of what they will be expected to need when they enter into business for themselves or seek employment in drug stores.

The properly trained business man-pharmacist will think better of the drug business as a calling if he knows how to do business. He will be less likely to condemn it as a career for his sons and have more occasion to be glad and proud of his work. All of us naturally enjoy doing those things at which we are successful.

One hundred years ago Old Doctor Webb's Apothecary Shop supplied the modest needs of the good folks of Salem, Massachusetts. The standbys were chamomile, green salve, salts, plasters, lint, lancets, brown Windsor soap, quill pens, red wax wafers and cobwebs. Service and distribution did not mean much. The drug business has evolved. Social groups are no longer sufficient to their own needs; life is more complex and much more pleasant. We think to-day in terms of efficiency. We judge things by their usefulness. The present-day drug store is a thoroughly modern institution. Who would have it as it was? It represents the modern trend and performs a mighty important function in the economic scheme of daily life.

The bulk of the stores of the country have invested capital of from three to ten thousand dollars each, invested in the products of from fifteen hundred to three thousand manufacturers assembled from all corners of the earth. The number of items ranges from three thousand to five thousand. The lines carried in stock will approximate thirty in the city, and in country stores from fifteen to fifty. It takes business brains to conduct establishments such as these at a profit. It requires buying skill; it necessitates system, salesmanship and managerial ability to keep this kind of a ship going full speed in the right direction. Where is the young man going to get this needed experience if not in a school of pharmacy? He cannot be expected to learn from a preceptor that which the preceptor himself does not know. Training in the economics of the drug business should be given in every school of pharmacy. It is just as much of an essential as materia medica, botany, pharmacognosy and chemistry.

There is a need for strictly professional pharmacists to whom business training might be of minor consequence, but the demand for such men and women could very easily be filled by a small fraction of the number of schools of pharmacy now offering degrees.

To you druggists who have occasion to employ clerks, this question is almost as important as it is to the student about to take a college course. Given a choice, how many of you would take long to decide between a professionally trained pharmacist and one who has combined with his college training the ability to safeguard your interests by increasing sales, systematizing your accounting methods, hastening your turnover and adding greatly to your profits? Could you not afford to pay such a man what his college training should warrant his asking and would you not be glad to do it?

It is sincerely to be hoped that our schools of pharmacy may see the wisdom of including pharmaceutical business training in their courses of study, or at least giving students the option of shaping their courses to meet their needs. The sooner this condition is brought about, the sooner will pharmacy take its rightful place among not only the professions but among the highly respected, substantial businesses of our towns and cities.

FURTHER CHAIN STORE FIGURES.*

BY CLYDE L. EDDY.

It is my painful duty to remind you of the Athenians, to spoil your perfect day, to throw a wet blanket on the proceedings, to be a kill-joy, a spoil-sport and a sudden shower at the summer picnic. I have bad news.

There are at the present time upward of 1800 chain drug stores in the United States. One in every twenty-five of the drug stores in the country is a link in a chain of similar stores. Four percent of the apothecary shops in the land are making money, or losing it, for persons who operate three such stores or more. In 303 chains of this kind there were 1,763 stores a few months ago—an average of six stores in every chain. In 1,763 drug stores, distributed between Portland, Maine, and San Diego, California, and Seattle, Washington, and Tampa, Florida, the men in charge are not the owners but only managers or super-salesmen whose main interest in the business must of necessity be in what they find in their weekly pay envelopes.

According to the best figures available these chains of stores transact about one hundred million dollars' worth of business annually, or ten percent of the total retail drug business of the country. Of every hundred dollars spent each year in American pharmacies, ten find their way to chain-owned establishments, and six of them to the 625 stores of the 21 largest chains. Every twenty-fifth drug store in the United States is a chain drug store. No city of 25,000 or more population is without chain stores or systems of them and the chains actually dominate the drug, as they do the tobacco and grocery, business in all of our larger cities.

There may be some consolation in knowing that the chain store is by no means confined to the drug field. As long ago as 1914 there were more than 2,000 chains of grocery, candy, cigar, five-and-ten-cent, and other kinds of stores, in each chain of which there were from three to 900 links—or 20,000 stores in all and that this number has increased enormously since that time is indicated by the fact that one of the chains, the Great Atlantic and Pacific Tea Company, operating 800 stores in 1914, had 4,905 of them at the beginning of 1922 and was opening new ones at the rate of twenty every week.

In the late nineties the Whelan brothers were operating eight stores in Syracuse, N. Y. The United Cigar Stores Company, which they founded, now operates 1,200 stores in 200 different cities and has back of it the enormous wealth of the Whelan interest and of the American Tobacco Company (through John B. Duke, its president). The F. W. Woolworth Company, with 774 stores in 1914, now has more than a thousand of them and, in the meantime, there has been a rapid and steady growth in such chains as the Butler groceries, the Child's restaurants, the United Candy stores and others. It is probably that not less than 50,000 chain stores have been opened in the United States since 1900.

Twenty-two years ago the old Hegeman Company had only four stores, all in New York City, and the Riker interests had two. There were three links in the Owl chain in California—and that was about the extent of chain drug store operations in this country. At the beginning of 1922 the Liggett Company had 230 stores in the United States and nearly 500 in England; the Owl, of California, had

* Read before Section on Commercial Interests, A. Ph. A., Cleveland meeting, 1922.

forty-one; the National of New York had twenty-seven and throughout the country there were 300 chains of drug stores, averaging six stores to the chain—and doing ten percent of the drug business of the United States.

Big money is behind this movement. When the Sherman and other anti-trust laws made it difficult for big financial interests to further exploit the industries a few years ago, they turned promptly to the retail field and so we have Standard Oil money in the Childs restaurants and in the Woolworth stores, while it is understood that Percy Rockefeller and E. H. Harriman money is back of the National Drug Stores and of the recently organized Mutual chain in Connecticut. It seems a little hard when we realize that the identical "Captain of Industry" who got our money yesterday when we bought gasoline at a filling station will get some more of it to-morrow, as a "Merchant Prince" when we go to the ten-cent store to buy something nice to take home to the wife.

Those of you who live in the large cities are familiar with that old story, "The Coming of the Chain." Some of you watched the United Cigar Stores Company come into New York City a number of years ago and promptly drive thousands of the old-time independent tobacco merchants out of business. Lately, and the process is still going on, you have watched the chain grocery stores invade the newly developing suburban sections of the city and strangle independent grocers so effectively that within a few months' time the field is in sole possession of the Great Atlantic and Pacific Tea Company, Daniel Reeves, Butlers' and Gristede Brothers. "God Save the King!"

I leave it to you to decide if conditions similar to that exist in retail pharmacy. Does the chain store operator rub elbows in friendly fashion with the independent dealer on the main streets of our larger cities or has he crowded him, with rare exceptions, into the suburbs, where he is following after him as rapidly as conditions permit? Has this unfriendly pushing led to an overcrowding of independent dealers in the less populous sections of our large cities and are these independent retailers hard put to make a decent living under the circumstances? Is there discontent among them and are they wondering which way to turn to make ends meet? Even a casual survey of conditions in retail pharmacy will give you the answer to these questions. The title of my paper does not permit me to take up those phases of the matter at this time.

COMMERCIAL PHARMACY OR BUSINESS ADMINISTRATION?*

BY ROBERT P. FISCHELIS.

Several years ago while conducting an investigation of the teaching of commercial training in pharmacy schools I was surprised at the number of letters received on the subject from pharmaceutical educators who did not believe in the teaching of what the "Pharmaceutical Syllabus" calls "commercial pharmacy." Discussion of the subject brought out that these professors did not fail to realize the make-up of the modern drug store, the need of training prospective pharmacists in accounting, advertising, selling and general merchandising and the advisability of giving such training in the enlarged pharmacy course. What then, was the objection to "Com-

* Read before Section on Commercial Interests, A. Ph. A., Cleveland meeting, 1922.

mercial Pharmacy" as a whole when its various subdivisions were approved of? Strange as it may seem it took some little time for the realization to sink in that it was not what we commonly understand as commercial pharmacy that was objected to but rather the designation "commercial pharmacy" applied to what is really merchandising or business administration.

All this fuss about a name! But after all there is justification for this point of view. The physician does not call his bookkeeping and collecting "commercial medicine." The lawyer does not designate his business administration "commercial law" and the chemist does not refer to the business phases of his work as "commercial chemistry." Advertising and selling are not peculiar to the practice of pharmacy, neither is bookkeeping. They come under the classification of business administration, or business science, if you please. While there may be modifications of general business methods for every profession or vocation, the fundamentals are the same. Let us therefore refer to the business or commercial phases of the drug industry as "Business Administration" or "Commerical Interests" and not as "Commercial Pharmacy." This will answer the two-fold purpose of being more accurately descriptive and avoiding any reflection on the professionalism of pharmacy as practiced in the prescription room or the laboratory.

When we now urge the colleges of pharmacy to turn out men fitted for the general work of the drug store as well as strictly pharmaceutical work we can resolve that a general course in business administration with special reference to the drug business be added to the present minimum pharmacy course. Most universities now have separate schools of business or colleges of commerce and it is not a difficult matter to add such training to the pharmacy curriculum.

A few years hence we will undoubtedly have a four-year pharmacy course in most institutions and these four years will be made up substantially of one year of general cultural training, the present two-year pharmacy course and a fourth year of business administration. This will give us a well-rounded course to fit all conditions in retail establishments and should be productive of a very high type of retail pharmacist.

A SIXTEENTH CENTURY CHAMPION OF PHARMACY.*

BY WILLIAM J. McGILL.

Writers on things historical in pharmacy mention often Dumas, Scheele, Sertürner, and others acknowledged as leaders in pharmacy and chemistry, who began their careers as apothecaries. There is one neglected champion of pharmacy, not himself an apothecary, but in his own field as deserving of fame as these others, and who merits some recognition for his defense of a calling often maligned.

This was Bernard Palissy, the potter—an occupation sometimes considered a trade, but which in his conception of it, rose to the dignity of artistry. His life dated from 1509–1589, so that he had as contemporaries, Titian, Michel Angelo, Agnolo, Cellini, della Robbia, and in his own way can be considered an artist as much as any of these. His birthplace was in Perigord, France, and he was the son of a glass-worker, at that time accounted a noble trade. In his youth he traveled much, visiting all parts of his native country, becoming acquainted with

* Section on Historical A. Ph. A., Cleveland meeting, 1922.

the pretensions of the alchemists and other pseudo-scientists of his time. He was interested particularly in natural history and natural phenomena. With little learning from books at his disposal, some of his sagacious deductions appearing in his later writings concerning the causes of the phenomena of nature which he had observed in his travels or which had been called to his attention are astonishing in their correspondence with explanations based on more modern theories. He settled in Saintes finally, and there labored for sixteen years to acquire the technique and experience which served him in producing the pottery with raised and colored figulines and the white enamel which made Palissy ware famous and as valuable to the discerning collector as the better known pieces of della Robbia, the Italian. Something of the iron conviction and unshakable persistence of the man is shown in that he burnt up most of his furniture and even part of his domicile itself in order that the fires under his kiln might be kept up and his experiments continue. Later the Constable of France, Montmorenci, became his patron, and finally he was called to Paris by the queen and became a retainer of the royal household. He died in the Bastille, however, in 1589, a victim of the religious feuds of his day.

This brief sketch is but to introduce a man of whose championship pharmacy can well be proud. The manner of its occurrence and his interest in a profession of which he was not a member can be explained by his firm friendship with Samuel Veyrel, the apothecary of Saintes, and also by his early travels which acquainted him with the silly assumptions of the quacks and charlatans then numerous in France.

It appears that in 1555 there was published at Lyons a pamphlet entitled "A Declaration of the Blunders and Tricks of the Apothecaries, very useful and necessary to every one studious and careful of his Health," written by Lisset Benancio, a physician, whose real name was Sebastian Colin. This broadside charged the apothecary with having little knowledge of his drugs, with counter-prescribing, and with extortion in the matter of prices.

Palissy's answer, defending the abused profession, refuted the charges made, and carried the fight into the other camp so ably that the physician was effectually silenced. The rebuttal was in the form of a tract, ingenuously called, "A Declaration of the Blunders and Ignorances of the Doctors, a Work very useful and profitable to every one studious and careful of his Health," and the author purported to be one Pierre Braillier "trading apothecary of Lyons." That Palissy was the real author has been well established. This tract appeared in 1556 and both it and the physician's work enjoyed a wide sale among the amused public.

Palissy says, among other things:

"It is well of Lisset to say that the apothecaries sell the virtues of drugs which God has supplied to us gratis, without cultivating them, which they ought not to do, and to tell us that it is a great sin against God. I would beg him to take the trouble to go and look for herbs, flowers, roots, seeds, gums, fruits, etc., and conserve and store them with great care and diligence, pay house rents, wages, and keep of servants, buy the drugs that come from distant lands for large sums of ready money, and then supply them gratis * * * I leave you to judge when they have conscience to take a dollar for feeling a pulse and ordering a julep, while the apothecary shall find trouble to get paid two sols, which is the greater thief, apothecary or physician?" Of physicians he thinks, "they have studied mumming more than medicine; it is in that, at any rate, that they are wisest; and they might more fairly call themselves incorporated mummers than physicians, for it is the chief perfection that they have."

He dwells also upon doctors who cannot cure themselves, and upon doctors who prescribe absurdly so that it is necessary for apothecaries quietly to rectify their blunders. He proceeds to catalogue with much shrewd discernment the blunders of which some of the medical profession were guilty and points out in an able fashion the qualities and duties of an honest and capable physician. He answers Lisset's charge concerning the complexity of the apothecaries' remedies in this fashion:

"Master Lisset blames us, saying that we cause many drugs to be used by the sick, in order that we may get more money; it is very much the contrary, for the sensible apothecary will take heed how he gives to the sick anything about which he is not assured by experience, and of which he does not clearly know the properties. He will not be like many doctors, who prescribe confusing recipes, that is to say, great triacles, a quantity of drugs, to make believe that they are very wise, where two or three things having good relation to the malady would be of more use than all the triacles. If anybody would examine the physician who prescribes them, he would find him pretty well puzzled to explain the use of half, and would find his prescription an inextricable knot; for it is impossible that so many drugs can produce an action favorable to the malady, without setting up another which is hurtful and obstructive, and which may have some occult virtue that is out of place. Therefore I hold that practitioner to be wise who combines into one prescription few medicaments."

Other foibles and fads of the healing art of that day are touched upon with ridicule, such as the use of powdered glass, gold, sapphires, rubies, emeralds, and coral dust as medicaments. Briefly, the whole work is a shrewd and illuminating satire on some of the practices common in the 16th century which were dignified by the name of science, and some of Palissy's observations could be heeded with profit by merchants and practitioners of our own times.

If there be any moral in the tale, it is found in the closing words of Palissy's preface:

"Here are not blamed the learned and wise, and not to be prolix, I will pray to God very heartily that He will give his grace so well to exercise our estates and vocations into which it has pleased Him to call us, that it may be to His praise and glory, so that we may have no just occasion to blame and abuse each other, to the great prejudice and debasement of our profession."

COLLEGE OF PHARMACY,
UNIVERSITY OF MICHIGAN,
ANN ARBOR.

THE STANDARDIZATION OF SCHOOLS OF PHARMACY.*

BY WILLIAM B. DAY.

Standardization is the topic of the day. Standardization of drugs, chemicals and galenicals occupies the attention of the revision committees of the United States Pharmacopoeia and National Formulary. Standards for state licensing examinations, drug store experience and educational qualifications are prominent in the deliberations of our affiliated organizations, the National Association Boards of Pharmacy. The American Conference of Pharmaceutical Faculties is discussing educational requirements, standards for admission to schools of pharmacy, standards for the courses given by these schools, standards for the equipment of the schools and even suggests standardizing the faculties themselves.

* Section on Education and Legislation, A. Ph. A., Cleveland meeting, 1922.

The American Pharmaceutical Association is vitally interested in all these matters but in none more than in the standardization of the schools of pharmacy for this bears directly on the one thing that is of supreme importance to the A. Ph. A., namely, the development of pharmacy and the determination of its status as a profession.

Our schools of pharmacy are making progress—for which the A. C. of P. F. deserves much credit—but we are still far behind our allied professions of medicine and dentistry. Will pharmacists and the public support more rapid progress toward higher standards?

We hear much of the commercialization of pharmacy, and even a casual observer must note that conditions in pharmacy have changed greatly in the last decade. Such commercialization seems unavoidable—it appears also in other professions—but it does not necessitate a lowering of ideals, for the pharmacist of to-day remains primarily a pharmacist—his professional knowledge and skill fix his status in the estimation of his patrons, and since he has accepted the responsible duties of the pharmacist he is bound to discharge them faithfully.

With the change in the manner of conducting drug stores comes a change in the value of the experience gained therein—at least in so far as this "practical experience" is a qualification for the license to practice. Hence the need for schools of pharmacy to supply more comprehensive training and more extended laboratory courses. Yet, the education of the pharmacist and the development of pharmacy go hand in hand. Neither can make headway without the other.

For these reasons I venture to present to this section rather than to the American Conference of Pharmaceutical Faculties this brief discussion of the standardization of colleges of pharmacy and to sound a warning against the establishing of standards that may hinder rather than promote the professional development of pharmacy.

Standards for schools of pharmacy are necessary, but they should be broad standards, capable of general application and, of course, only intended as a minimum upon which development along several lines may be based. Schools of pharmacy must develop according to their opportunities and their environment, they cannot all, like the victims of Procrustes, be made to fit the same bed. Important as the teaching work is, the activities of the school of pharmacy must not cease there.

Just as the objective of the pharmacist should be service to his community, both as a pharmacist and a citizen, rather than the amassing of personal wealth, so the school of pharmacy should aim to be of service to the pharmacists and to the citizens of its city and state. The school should be a clearing house for pharmaceutical knowledge. Its library and collections should be available to pharmacists and to the public. Its faculty should endeavor to help pharmacists with their problems and be able to take an active part in affairs. It should, in fact, be a center for things pharmaceutical.

Schools that train for leadership deserve our praise—honor to them! But intelligent followers are no less important than leaders. Unless the rank and file select capable leaders and support them effectively, wise leadership is impossible.

Schools must prepare their students *to be pharmacists* rather than to prepare them "for pharmacy." This implies broadening the courses and giving them

greater cultural value, and yet the young men and women who are graduated by the school and thereby stamped with its approval have the right to expect that they shall also be able to qualify for the practice of pharmacy by passing the state examination. This condition will continue so long as the examination given by the board of pharmacy is the standard whereby the qualification for practice is finally determined. It therefore becomes necessary for the schools to consider the nature and scope of these board examinations in shaping their courses.

Whatever standards are established for schools of pharmacy, their reputation will be fixed and their usefulness judged by their fruits—their alumni. So let us not bind them too closely by material standards, of buildings, of equipment of libraries—important as these are, but let us also consider the use that is made of these advantages, the place which the school of pharmacy occupies in its community, the *esprit de corps* of its faculty and students, and the professional standing of its alumni.

PROCEEDINGS OF THE LOCAL BRANCHES

"All papers presented to the Association and its branches shall become the property of the Association, with the understanding that they are not to be published in any other publication than those of the Association, except by consent of the Committee on Publication."—By-Laws, Chapter X, Art. III.

Reports of the meetings of the Local Branches should be mailed to the Editor on the day following the meeting, if possible. Minutes should be typewritten, with wide spaces between the lines. Care should be taken to give proper names correctly, and manuscript should be signed by the reporter. To maintain its activity and representation each branch should see that at least three of its meetings during the year are reported in the JOURNAL.

NORTHERN OHIO BRANCH.

A special meeting of the Northern Ohio Branch of the American Pharmaceutical Association was held August 18, 1922. Chairman Eugene R. Selzer stated that the purpose of the called meeting was to consider the matter of making a donation to the Headquarters Fund of the A. Ph. A. Otto Muhlhan moved that the sum of five hundred dollars be donated and presented while the Association was in session in Cleveland. The motion was seconded by W. H. Hagemeister, put to a vote and carried unanimously. This being the special purpose for which the meeting was called, the session was adjourned.

EUGENE R. SELZER, *Chairman.*

REPORT OF THE COMMITTEE ON LOCAL BRANCHES.*

BY IVOR GRIFFITH, CHAIRMAN.

Frankness is the mouthpiece of honesty, and if frankness will make any amends for apathetic activity and for mediocre results, this committee headed by its chairman and spokesman will submit a report that will at least stand on honest legs.

In point of accomplishment our record is not particularly scintillating. In keeping with the original function of the committee it is its business to aim at the establishment of new branches and to sustain the old. Establishing new branches is a physical impossibility under existing conditions, and sustaining the old is like feeding oxygen to a case of double pneumonia.

We endeavored at the outset of the year's program to discover just what branches were actually living up to their obligations in point of called meetings and other activities. Oddly enough we failed to obtain any encouragement or information from the major number of listed local organizations. From a few we received notices of marked activities and of a full understanding of their responsibilities. Others entirely disregarded our communications. Eight of the local branches seem to be functioning properly; the others flare up occasionally and show signs of life only to

* The report was received and approved at the Cleveland meeting, A. PH. A.

simmer down again to a state of benevolent indifference.

An effort was made by communication with existing Branch officers to determine where the difficulties originated, and wherein the Local Branch idea might be bettered, but no co-operation was forthcoming except from a few of the officers.

The only information which came to me, and which seemed to be of value was that some success resulted from giving a social aspect to the Branch meetings. A few Branches gain a good attendance by convening after the fashion of the Chemical Society Branches, namely, with a combined dinner and meeting. It nevertheless seems paradoxical that science and professional progress need sugar coating to meet the tastes of some people, but if this condition exists then sugar coating is in order.

Gaining the support of the retail druggist is a problem that has dulled the ardor of many a Local Branch enthusiast and this committee frankly outlines its opinion in stating that the permanent enlistment of the interest of the average retail druggist cannot be secured under the present plan of conducting Local Branch meetings. Your committee respectfully acknowledges its inability to suggest means whereby the Branches can be constructively conducted and continue to interest the retail druggist.

It is held that the contemplated reorganization of the Association will alter the issue somewhat in regard to Local Branches. A premium is placed upon the sustained conduct of Branch meetings and Local Branches will not be eligible for representation in the new House unless certain conditions of membership and attendance are met. Such a plan is valuable providing the new Judicial Committee searches well into the credentials of delegates coming from Local Branches. Under the present system there are Local Branches which have long ago automatically extinguished themselves, but which seem to function in Council representation. This condition should not obtain under the new system.

The committee consistently opposed the elimination of the Local Branches under the proposed plan of reorganization and feels that the Council acted wisely and generously in perpetuating the Branches. It is quite conceivable that added interest and renewed vigor may come to the Branch idea through the adoption of the new plan of association conduct.

The Committee on Local Branches is composed of the following: L. Saalbach, R. W. Terry, C. W. Johnson, B. H. Eichold, Francis Hemm, E. S. Thatcher, F. E. Bibbins, Ivor Griffith.

BRIEF ABSTRACTS OF PAPERS READ BEFORE SCIENTIFIC SECTION, A. PH. A., CLEVELAND MEETING.

A Garden of Herbs.

By C. A. Mayo.

A brief general discussion of the author's results in growing plants, predominantly of a medicinal character, on a city garden plot. "Even for the pharmacist of limited means and restricted leisure there is a possibility of great pleasure in the making of such a garden, and if he is fortunately located near woods he will find much interesting material among the indigenous drugs.

A Back-Yard Pharmaceutical Garden.

By E. E. Stanford.

The botanical garden of Western Reserve University School of Pharmacy was started in 1921 on a plot of about one-fifth acre immediately surrounding the school building. About 80 species of medicinal plants have thus far been cultivated. Special attention is being paid to the **Labiatae.** A collection of indigenous medicinals is being built up. The work of planting, transplanting, and caring for the garden is done by students as a part of the laboratory courses in botany and pharmacognosy.

The Medicinal and Poisonous Plant Investigations Gardens—Their Relation to the School of Pharmacy, State College and to the Community.

By Anton Hogstad, Jr.

Since the time of the introduction of the Medicinal and Poisonous Plant Investigations Gardens at the South Dakota State College, they have played an important part in the growth of the School of Pharmacy. The paper deals with the interest that has been created throughout the state in this project with the resulting benefits to the School of Pharmacy. The daily benefits to be derived from such a project are also discussed.

THE DEPARTMENT OF THE AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES

[EDITOR'S NOTE:—

The Cleveland meeting of the Conference was one of the most notable in its history. A most excellent program was given and the inspiration which came from contact with each other and from men from the outside, such as Ex-Secretary of War, Newton D. Baker, will long be felt.

The chairman hopes in the near future to print in full these inspiring addresses. It was thought best to record in the present issue a number of the reports which discuss the business and educational affairs of the Conference.

RUFUS A. LYMAN, *Chairman Executive Committee and Conference Editor.*]

SUMMARY OF THE PROCEEDINGS OF THE AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES, 1922 MEETING.

The twenty-third annual meeting of the American Conference of Pharmaceutical Faculties was held at the Hotel Statler, Cleveland, Ohio, August 14–15, 1922. Delegates were present from thirty-seven member colleges located in twenty-seven states. President Clair A. Dye of Ohio State University College of Pharmacy presided at all sessions.

President Dye in his address discussed practical experience requirements, prerequisite legislation, abolition of state boards, research, the Syllabus, non-Conference schools, and federation of pharmaceutical associations. In discussing prerequisite requirements and reciprocal registration, he said that he believed that adoption of high school graduation as a minimum requirement would bring about the uniformity which is necessary, if reciprocity is to mean what it should. He submitted a plan for handling practical experience requirements for registration. Briefly, it is to give the examination when college work is completed, issue an assistant's certificate, if the candidate passes, and when the practical experience requirement is completed grant a certificate of registration without further examination. The question of practical experience is so important that the Conference decided to refer it to the Committee on Relations of the Colleges to the Boards for study, a report to be given next year. President Dye directed attention to the tendency of some state governments to combine various boards and commissions and to the signal failure of the plan in one state. He said, "We should not only be constantly but aggressively alert to counteract any movement which will tend to remove pharmacy from the control of pharmacists and thus block our efforts to raise the standards of pharmacy, educationally, commercially and ethically." Inasmuch as the 1200-hour minimum requirement for the two-year course, as outlined in the Syllabus, affords a basis for unfair comparison of Conference schools with non-Conference ones as well as the standard for law requirement, President Dye suggested that the minimum should be made not less than 1500 hours and a recommendation to that effect was adopted.

The report of the secretary-treasurer, Theodore J. Bradley, showed that forty-eight colleges are members of the Conference and that the balance in the treasury is $1158.02.

Chairman Rufus A. Lyman, in his report for the Executive Committee, stated that the number of new students registering in Conference colleges in 1921–1922 was 3942, which was over 500 more than in the preceding year. Those having four years of high school, or more, numbered 2550; those having three years of high school, 385; those having two years, 472. Analysis of these figures indicates a marked increase in those having four years or more of preparation and also those having three years and a decrease in two-year students. It was reported that the School of Pharmacy of Valparaiso University had been admitted to membership during the year.

The Executive Committee made the following recommendations and they were adopted:

1. That a transcript of a student's record in a school which he is leaving be required before he is permitted to register in a second school.

2. That a certificate of honorable dismissal from the first school be a requirement for admittance to a second school.

3. When above conditions are complied with it is optional on the part of the second school whether a student be admitted.

4. That $200 per annum, beginning January 1, 1922, be appropriated for the support of the Conference Section in the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

5. That the length of the school year be increased from a minimum of 25 weeks to 30 weeks.

The report of the Pharmaceutical Syllabus Committee was received. Chairman Theodore J. Bradley stated that the new edition of the Syllabus will appear in a few weeks and directed attention to the fact that the Syllabus "should not, and does not pretend to say that anyone must follow it. It is suggestive and tries to be helpful but is not in any way obligatory."

A dinner was given by the Conference in honor of Dr. H. H. Rusby and following the dinner Dr. Rusby told some of his personal experiences on his South American trip. At this same session Dr. Caswell A. Mayo gave an illustrated lecture on the physical plants of the schools holding membership in the Conference.

Reports of standing committees were received as follows:

Committee on Faculties, C. E. Caspari, *Chairman.*

Committee on Curriculum and Teaching Methods, W. J. Teeters, *Chairman.*

Committee on Activities of Students and Alumni, Zada M. Cooper, *Chairman.*

Committee on Uniform College Bulletins, J. A. Koch, *Chairman.*

Committee on Relations of Pharmacy Schools with Other Professional Schools, L. S. Blake, *Chairman.*

Committee on Relations of the Colleges with the Boards, Jacob Diner, *Chairman.*

Committee on Examination Questions, G. C. Diekman, *Chairman.*

Committee on Research, Albert Schneider, *Chairman.*

Reports of the following special committees were received:

Committee to Prepare and Distribute Information on Prerequisite Legislation, W. B. Day, *Chairman.*

Committee to Urge that the Carnegie Foundation Investigate the Pharmacy Schools of the United States, W. F. Rudd, *Chairman.*

At the third session the Honorable Newton D. Baker addressed the Conference, telling something of the educational work undertaken for our army after the armistice. In closing he urged that pharmaceutical faculties recognize the dignity of their relation to all education.

The following papers were presented: "Dispensary and Hospital Teaching in the Medical College of Virginia," by W. G. Crockett; "The Hospital Dispensary and the College of Pharmacy," by W. J. Teeters; and "The Service Features of a College of Pharmacy Library," by H. V. Arny. At the second session, Edward Kremers gave a talk on "A Pharmaceutical Apprenticeship—a Possible Renaissance," and another at the third session, on "How We Get Our Students to Use the General University Library."

The following officers were elected for the ensuing year:

President: Charles H. LaWall, Philadelphia, Pa.

Vice-President: Charles H. Stocking, Ann Arbor, Mich.

Secretary-Treasurer: Zada M. Cooper, Iowa City, Ia.

Executive Committee: Rufus A. Lyman, Lincoln, Nebr., *Chairman:* Wortley F. Rudd, Richmond, Va.; Julius A. Koch, Pittsburgh, Pa.; Wilber J. Teeters, Iowa City, Ia.; Charles B. Jordan, Lafayette, Ind.

Members of Syllabus Committee: Theodore J. Bradley, Boston, Mass.

Representative to National Drug Trade Conference: Evander F. Kelly, Baltimore, Md.

Submitted by ZADA M. COOPER, *Secretary-Treasurer.*

REPORT OF THE COMMITTEE ON PHARMACEUTICAL SYLLABUS.*

To the American Pharmaceutical Association:

The Syllabus Committee respectfully submits the following report for 1921–1922.

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* This report is made to coöperating organizations. The report to the Association was approved, referred to Council, and contribution continued.

It is with great satisfaction that we can announce the completion of the work of revision and that the new edition of the Pharmaceutical Syllabus is to appear within a few weeks. The difficulties encountered in doing this work, during the war and reconstruction periods, have been great and the committee hopes it has been able to prepare an edition that will show many improvements over its predecessors, though we realize that the work is still far from what we are striving for and what we expect will gradually be attained as the successive editions appear.

The Syllabus is in no sense a profit-making enterprise. In fact, one of the chief difficulties in producing it is the lack of funds for necessary expenses. The committee, however, has tried very hard to manage so that the work shall be as nearly self-supporting as possible and to be clear of debt after the new edition is issued and distributed. Your organization contributes twenty-five dollars per year towards the expenses of the work and it is recommended and requested that this contribution be continued.

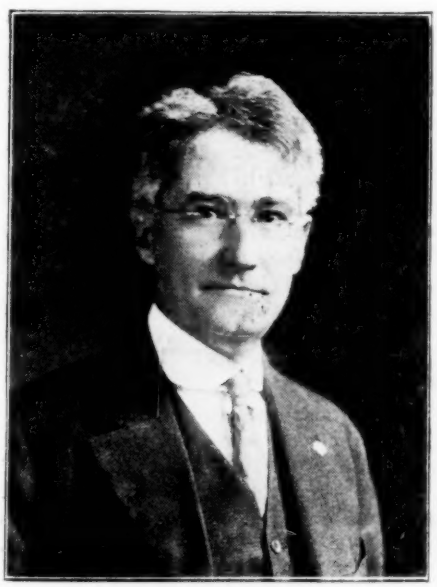
For purposes of record the present membership of the Committee is given here.

From the American Pharmaceutical Association—George M. Beringer, Camden, N. J.; Henry H. Rusby, New York, N. Y.; Willis G. Gregory, Buffalo, N. Y.; William H. Rudder, Salem, Ind.; Edwin L. Newcomb, Minneapolis, Minn.; Eugene G. Eberle, Philadelphia, Pa.; E. F. Kelly, Baltimore, Md.

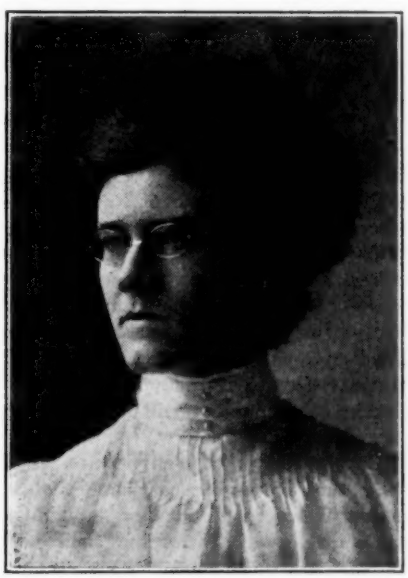
From the American Conference of Pharmaceutical Faculties—Theodore J. Bradley, Boston, Mass.; Clyde M. Snow, Chicago, Ill.; Albert M. Bolenbaugh, Richmond, Va.; Edsel A. Ruddiman, St. Louis, Mo.; E. Fullerton Cook, Philadelphia, Pa.; William C. Anderson, Brooklyn, N. Y.; Julius A. Koch, Pittsburgh, Pa.

From the National Association of Boards of Pharmacy—Charles S. Koon, Muskegon, Mich.; W. R. Montgomery, Butte, Mont.; Otto W. Osterlund, Philadelphia, Pa.; Warren E. Scott, Oakdale, La.; George C. Diekman, New York, N. Y.; Samuel A. Williams, Troy, Ala.; John Culley, Ogden, Utah.

(Signed) THEODORE J. BRADLEY, *Chairman.*



CHARLES H. LAWALL,
President, A. C. P. F.



ZADA M. COOPER,
Secretary-Treasurer, A. C. P. F.

REPORT OF COMMITTEE ON MODERN PHARMACY LAW.*

To the American Pharmaceutical Association:

At the New Orleans convention last year, a completed draft of a Modern Pharmacy Law was submitted, subject to reservation on the part of the Committee, that it have the right before publication to make a few minor changes, if deemed necessary. The convention at that time accepted the report and draft of the committee granting its request, and also adopted the suggestion of the committee, that subsequent to publication the draft be submitted for the consideration and study of the membership, with a view of the Association taking final action at its Cleveland convention.

Owing to many demands upon the time of the chairman of your committee, a consideration and agreement upon minor changes could not be completed until May of this year, and thus publication of the draft in the JOURNAL could not be made until July. This has prevented the desired and absolutely necessary consideration by the membership, so that intelligent final action might now be taken. In the opinion of the committee consideration of the draft and a discussion of its many provisions during the convention is not feasible, since likely it would consume several days of undivided time. It should be mentioned also that in the appointment of committees President Hilton made a change in the membership of this committee by appointing Mr. H. C. Christensen to take the place of Mr. Geo. M. Beringer. Mr. Christensen expressed a desire to take no active part in the work of the committee until after the publication of the draft and its final consideration, study and criticism by the membership.

Owing to the very great importance of this entire subject, which requires that there be no haste in taking final action, your committee now recommends that the draft of the proposed Model for a Modern Pharmacy Law as published in the July number of the JOURNAL find the necessary consideration of the membership during this year, so that final action may be taken at the next annual convention. **To serve that end it is requested that the editor of the JOURNAL during the year call repeated attention to the draft as published in the July number of the JOURNAL, asking that all criticism and suggestion for desirable change be addressed to the Chairman of the Committee.** It is the thought that the Committee should then at the next annual convention present for separate consideration and discussion such criticism and suggestion for amendment in order that these may be disposed of in comparatively short time, so that the convention can then proceed to take immediate final action.

CLEVELAND, August, 1922.

(Signed) WILLIAM C. ANDERSON, J. H. BEAL,
H. C. CHRISTENSEN, F. E. STEWART,
FRANK H. FREERICKS, *Chairman.*

THE LAW AND THE INNOCENT BYSTANDER.

Dr. J. H. Beal delivered an address on the above-named subject at the convention of the National Association of Retail Druggists in Detroit. The following extracts are reprinted from *Oil, Paint and Drug Reporter*, October 2:

"Restrictive legislation has become a menace to the American people and the government established by our ancestors is being replaced by an autocratic bureaucracy that functions for the benefit of an organized minority that imposes its will upon the unorganized masses."

"Within the past twenty-five years," he said, "the United States have probably adopted more restrictions on individual enterprises than ever before in their history, and their number is steadily increasing. The druggist to-day has to consult his lawyer more often than the pages of his pharmacopoeia."

Professor Beal placed reformers who try to regulate business by statute in the same class as the Russian radicals. "Our quarrel," he said, "is with the reformers' use of legislation as a universal cure-all, when centuries of experience have proved its inefficiency."

Since so many reforms went into effect, according to Professor Beal, the number of people holding Federal positions has increased 40 percent and their salaries 150 percent. Law-breaking instead of being a disgrace has come to be a joke—a national pastime, he said.

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* The report was approved, and is printed here in order to direct attention to the draft of the Law in July JOUR. A. PH. A., pp. 568–575. The address of chairman, Frank H. Freericks, is Mercantile Library Building, Cincinnati, Ohio.

BIBLIOGRAPHY OF PHARMACEUTICAL RESEARCH

Conducted by H. V. Arny, Chairman of the Committee on Research.

On these pages, each month, will be found a list of articles on pharmaceutical research; the list appearing a certain month will record articles appearing in American journals of the preceding month and articles appearing in foreign journals will be recorded as quickly as possible after the journals reach the Reporter.

[This is the last monthly Bibliography that will be prepared by Dr. Arny. That appearing in the November issue will be the work of Dr. A. G. DuMez, the new Reporter on the Progress of Pharmacy.—Editor.]

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Südd. Apoth. Ztg.; through *Pharm. Ztg.*, 67 (Aug. 16, 1922), 681
Samaan, K.
Strophanthus Preussii
Pharm. J., 109 (July 29, 1922), 83
Schulte
Assay of tannin in drugs
Pharm. Weekbl.; through *Drug. Circ.*, 66 (Sept. 1922), 358
Wallis, T. E.
Characteristics of wheat starch
Pharm. J., 109 (July 29, 1922), 82
Wieland, H., and Alles, R.
Toxic substance from toads
J. Soc. Ind., 41 (Aug. 15, 1922), 607A
Willbrand
Onions as a digestant
Münch. med. Wsch.; through *Drug. Circ.*, 66 (Sept. 1922), 358
Youngken, H. W., and LaWall, C. H.
Anatomical and chemical studies of Chenchrus tribuloides
Am. J. Pharm., 94 (Sept. 1922), 567

GENERAL AND PHYSICAL CHEMISTRY.

Anon
"Fixanal" for normal solutions
Chem. Ztg.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 667

Chrichton, R. H.
Analysis of milk foods
Pharm. J., 109 (July 29, 1922), 94
Dutoit, P., and Grobet, E.
Adsorption by precipitates
J. chim. phys.; through *Pharm. J.*, 109 (Aug. 26, 1922), 213
Harkins, W. D.
Atom nuclei, isotopes and the whole number rule
J. Frank. Inst., 194 (Sept. 1922), 329
Harkins, W. D.
Stability of atom nuclei
J. Frank Inst., 194 (Aug. 1922), 165
Hoffmann, F.
Pyrogallol in gas analysis
Z. angew. Chem.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 667
Justin-Mueller, E.
Colorimetric precision
J. pharm. chim., 26 (July 1, 1922), 18
Stutterheim, G. A.
Assay of moisture in food-stuff
Pharm. Weekbl., 59 (Sept. 2, 1922), 923
Thomson, J. J.
Electron theory of solids
J. Frank. Inst., 194 (Sept. 1922), 281
Walker, G. W.
Determination of solubility
Am. J. Pharm., 94 (Sept. 1922), 607
Williams, J. R., and Swett, M.
Hydrogen-ion concentration studies
Am. J. Pub. Health; through *Am. Drug.*, 70 (Aug. 1922), 39

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Arndt, K., and Hantage, E.
Electrolytic preparation of sodium perborate
Z. Elektrochem.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 587A
Blatherwick, N. R., and Long, M. L.
Calcium and phosphorus in medicines
J. Biol. Chem.; through *Pharm. J.*, 109 (Aug. 5, 1922), 158
Cavazzuti, A.
Bactericidal power of salts of tellurium and selenium
Ann d'ig.; through *Pharm. J.*, 109 (July 22, 1922), 67
Chouchack, E. T.
Colorimetric assay of arsenic with quinine molybdate
Ann. Chim. Analyt.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 612A
Freymuth, A.
Chlorinated lime and sodium thiosulphate
Pharm. Ztg., 67 (Aug. 30, 1922), 728
Gawalowski, A.
Sodium perborate of commerce
Pharm. Monatsh.; through *Pharm. Zent.*, 63 (Aug. 24, 1922), 445
Gourneau and Kiefer
Carbon tetrachloride in erysipelas
Bull. Soc. Med. Paris; through *Drug. Circ.*, 66 (Sept. 1922), 357
Green, C. R.
Calcium lactophosphate in vomiting
Med. Rec.; through *Am. Drug.*, 70 (Aug. 1922), 41
Gutbier, A., Huber, J., and Zweigel, A.
Preparing colloidal silver
Kolloid. Zsch.; through *Pharm. J.*, 109 (Aug. 5, 1922), 130
Hall, M. C.
Carbon tetrachloride as hook-worm cure
Southern Pharm. J., 15 (Sept. 1922), 18
Hammett, F. S., and Adams, E. T.
Colorimetric magnesium assay
J. Biol. Chem.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 612A
Heslinga, J.
Manganese oxidation test
Chem. Weekbl.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 613A
Kolthoff, and Bak
Assay of halogens with mercuric nitrate
Chem. Weekbl.; through *Drug. Circ.*, 66 (Sept. 1922), 357
Hormann
Arsenical polyneuritis
Zent. Neurol. Psychiat.; through *Pharm. J.*, 109 (Aug. 5, 1922), 157
Laumonier
Colloidal iodine in tuberculosis
J. pharm. chim., 26 (July 16, 1922), 76
Lebeau
Uranium oxides
Compt. rend.; through *Drug. Circ.*, 66 (Sept. 1922), 358
Lüning
Adulteration of potassium iodide with potassium bromide
Pharm. Ztg., 67 (Aug. 30, 1922), 728
Macaulay
Assay of sulphites
J. Chem. Soc.; through *Drug. Circ.*, 66 (Sept. 1922), 357
Matthews, F. C.
Slaking lime
Chem. Trade J.; through *Pharm. J.*, 109 (Aug. 5, 1922), 145
McClendon, J. F.
The world's supply of iodine
Science, 56 (Sept. 8, 1922), 269

Sazerac, R., and Levaditi, C.
Bismuth salts in syphilis
Compt. rend.; through *J. pharm. chim.*, 25 (June 16, 1922), 514

Schreiber, E. C.
Aluminum acetate as styptic
Schweiz. med. Wochensch.; through *Pharm. J.*, 109 (Aug. 5, 1922), 157

Van Riemsdijk, M.
Oxygen indicator
Ned. Tijd. Genusk.; through *Pharm. J.*, 109 (July 22, 1922), 67

Walker, R. R.
Kaolin in cholera
Lancet; through *Am. Drug.*, 70 (Aug. 1922), 41

Winkler, L. W.
Assay of alkaline iodides
Pharm. Zent., 63 (July 27, 1922), 386

ORGANIC CHEMICALS.

Anon
Poisoning by quinine
J. Am. Med. Assoc.; through *Pharm. J.*, 109 (July 22, 1922), 71

Anon
Pulguera oil
Mat. graiss.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 668

Aaser, P.
Methyl violet for suppurating wounds
Tidsskr. Norsk Laegefr.; through *Pharm. J.*, 109 (Aug. 26, 1922), 215

Ackermann
Myrtilol
Ber.; through *J. pharm. chim.*, 26 (Aug. 1, 1922), 113

Arreguine, V., and Garcia, E. D.
Color test for urea
Ann. Assoc. Quin. Argentina; through *Pharm. J.*, 109 (Aug. 12, 1922), 158

Asahina, Y., and Kuwada, S.
Constitution of elsholzic acid
J. Pharm. Soc. Japan, No. 485 (July 1922), 565

Bauer, K. H., and Herberts, K.
China wood oil
Chem. Umschau; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 638A

Bennett, A. H.
Oil of lemon seed
Perf. Ess. Oil. Rec.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 639A

Bergmann, M., and Miekeley, A.
Ethyl glycoloside
Ber.; through *J. pharm. chim.*, 26 (Aug. 1, 1922), 118

Bougault, J., and Gros, R.
Assay of aldehydes and ketones with Nessler's reagent
J. pharm. chim., 26 (July 1, 1922), 5

Brill, H. C., and Brown, R. E.
Philippine papain
Philippine J. Sci.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 645A

Brown, R. C., and Kremers, R. E.
Identifying phenols
J. Am. Pharm. Assoc., 11 (Aug. 1922), 607

Carrière
Eucalyptol in whooping cough
Pract. Drug. (Sept. 1922), 34

Christiansen, J.
Propyl alcohol as disinfectant
Dtsch. med. Wsch.; through *Pharm. Zent.*, 63 (Aug. 3, 1922), 407

Davies, E. C., and Grier, J.
Properties and assay of colchicine
Pharm. J., 109 (Aug. 26, 1922), 210

DeFasi, R.
New synthetic glucosides
Gazz. chim. ital.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 608A

Elfer
Use of morphine in heart disease
Pharm. J., 109 (Aug. 26, 1922), 215

Evers, N.
Separation of quinine and strychnine in mixtures
Pharm. J., 109 (July 29, 1922), 90

Fleury, P., and Poirot, G.
Colorimetric assay of furfurol
J. pharm. chim., 25 (June 16, 1922), 520

François, M., and Blanc, L. G.
Preparation of crystalline alkaloidal mercuric iodides
Compt. rend.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 645A

Giaya, J.
Decomposition of amygdalin by the digestive fluid of Helix pomatia
J. chim. phys.; through *J. pharm. chim.*, 26 (July 1, 1922), 34

Godchot and Brun
Suberone derivatives
Compt. rend.; through *J. pharm. chim.*, 26 (Aug. 1, 1922), 120

Greenish, H. G., and Pearson, C. E.
Sources of santonin
Pharm. J., 109 (July 29, 1922), 85

Grün and Janko
Separation of saturated and unsaturated fat acids
Chem. Umschau; through *Pharm. Zent.*, 63 (Aug. 3, 1922), 402

Hansen
Influence of alcohol on disinfectants
Hospital Tid.; through *Am. Drug.*, 70 (Aug. 1922), 20

Harris, W.
Alcohol injections in facial neuralgia
Lancet; through *Pharm. J.*, 109 (July 22, 1922), 67

Hasse, P.
Detecting nitrobenzol in benzaldehyde
Chem. Ztg.; through *Pharm. Zent.*, 63 (Aug. 3, 1922), 404

Hasse, P.
Refractometric assay of vanillin
Chem. Ztg.; through *Pharm. Zent.*, 63 (Aug. 3, 1922), 405

Hausmann
Test for urobilin
Zsch. klin. med.; through *Pharm. Era*, 55 (Sept. 1922), 327

Herissey, H.
Biochemic synthesis of methyl-mannoside
J. pharm. chim., 25 (June 16, 1922), 497

Hixon, R. M.
Production of thymoquinone
J. Am. Pharm. Assoc., 11 (Sept. 1922), 696

Jarno, L.
Pepsin assay
Arch. Verdauungskrank; through *Pharm. Zent.*, 63 (Aug 10, 1922), 416

Johnson, W.
Therapeutics of luminal
Lancet; through *Pharm. J.*, 109 (Aug. 19, 1922), 200

Kahlenberg, L.
New color tests for cholesterol
J. Biol. Chem.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 608A

Kamm, W. F., and Matthews, A. O.
Preparation of pure benzyl benzoate
J. Am. Pharm. Assoc., 11 (Aug. 1922), 599

Kaufmann, H. P., and Friedenbach, M.
Abietic esters from pine needles
Ber.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 598A

Kinugasa, Y., and Hattori, Y.
Rice-bran vitamines
J. Pharm. Soc. Japan, No. 485 (July 1922), 579

Kochmann, E.
Microchemical detection of chelidonium alkaloids
Pharm. Ztg., 67 (Aug. 23, 1922), 705

Kofler, L.
Assay of saponin in soft drinks
Z. Nahr.-Genussm.; through *J. Soc. Chem. Ind.*, 41 (July 31, 1922), 564A

Kremers, R. E.
Action of phenyl hydrazine on pinene nitrosochloride
J. Am. Pharm. Assoc., 11 (Aug. 1922), 604

Kremers, R. E.
Oil of mentha aquatica
J. Biol. Chem.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 647A

Levene and Rolf
Unsaturated fatty acids in egg lecithin
J. Biol. Chem.; through *Drug. Circ.*, 66 (Sept. 1922), 358

Limbourg, C.
Detecting benzol in benzin
Chem. Ztg.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 658

Loeper and Mongeot
Effect of pepsin injections
Med. Press.; through *Pharm. J.*, 109 (July 22, 1922), 67

Lührig, H.
Iodine number determination
Pharm. Zent., 63 (Aug. 10, 1922), 411

Lumont
Adrenalin in whooping cough
Med. Press.; through *Am. Drug.*, 70 (Aug. 1922), 40

Lyons, A. B.
Chapin's methyl alcohol test
J. Am. Pharm. Assoc., 11 (Sept. 1922), 682

Maclaurin, J. S.
Formation of phenol during putrefaction
Analyst; through *Pharm. J.*, 109 (July 22, 1922), 67

Mailhe, A.
Catalytic decomposition of peanut oil
Bull. soc. chim.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 598A

Mast, S. O., and Ibara, Y.
Effect of alcohol on tadpoles
Am. J. Physiol.; through *Pharm. J.*, 109 (July 22, 1922), 67

McCollum, E. V.
Calcium depositing vitamine
Johns Hopkins Hosp. Bull.; through *Pharm. J.*, 109 (Aug. 26, 1922), 215

Michaelis, L.
Influence of alkalinity on activity of cinchona alkaloids
Klin. Wsch.; through *Pharm. Ztg.*, 67 (Aug. 16, 1922), 680

Mörner, C. T.
Magnesium compound of ortho-oxyquinoline
Pharm Zent., 63 (Aug. 3, 1922), 399

Moudgill, K. L., and Vridhachalam, P. N.
Volatile oil of Lantana camara
Perf. Ess. Oil. Rec.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 610A

Murschhauser, H.
Change in rotary and reducing power of dextrose by hydrochloric acid
Biochem. Zsch.; through *J. pharm. chim.*, 26 (July 16, 1922), 64

Nadai, G.
Bleaching oils
Chem. Umschau; through *Pharm. Zent.*, 63 (Aug. 24, 1922), 444

Neuberg
Aldehyde content of sulphite alcohol
Chem. Ztg.; through *Pharm. Zent.*, 63 (July 27, 1922), 388

Nyberg
The alcohols in oil of Pastinaca sativa
Z. finn. Apoth. Ver.; through *Pharm. Zent.*, 63 (Aug. 17, 1922), 432

Ogilvie, J. P.
Relative sweetness of cane and beet sugars
J. Soc. Chem. Ind., 42 (Aug. 31, 1922), 343R

Paolini, V.
Isomeric amyrols
Atti Accad. Lincei; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 608A

Pascal, P.
Manufacture of ethyl alcohol
J. pharm. chim., 25 (June 16, 1922), 508

Penfold, A. R.
Oil of Doryphora sassafras
Perf. Ess. Oil. Rec.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 647A

Piepaerts, P.
Copal oil
Pharm. Ztg., 67 (Aug. 23, 1922), 706

Plauson
New extraction solvent
Chem. Ztg.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 668

Raiziss, G. W., and Blatt, A. C.
Condensation products of arsphenamine with aldehydes
J. Am. Chem. Soc., 44 (Sept. 1922), 2033

Read, W. T.
Synthesis of nirvanol
J. Am. Chem. Soc., 44 (Aug. 1922), 1746

Reisz and Schorer
Refractometric assay of pepsin
Klin. Wsch.; through *Pharm. Ztg.*, 67 (Aug. 16, 1922), 681

Richaud, A.
Hypotensive power of adrenalins
J. pharm. chim., 26 (Aug. 1, 1922), 81

Saha, H., and Choudhury, K. N.
Capsularin from jute leaf
Chem. Soc. Trans.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 607A

Schomer, A.
Yohimbine assay
Pharm. Zent., 63 (July 27, 1922), 385

Schoofs, M.
Volatile oil of Myrica Gale
J. pharm. Belg.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 610A

Schoorl
Volumetric assay of quinine alkaloids
Drug. Circ., 66 (Sept. 1922), 358

Seidell, A.
Isolation of antineuritic vitamine
J. Am. Chem. Soc., 44 (Sept. 1922), 2042

Simonsen, J. L.
Oil of the leaves of Abies Pindrow
Indian Forest Rec.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 647A

Somerville, J. L.
Solubility of West Australian sandalwood oil in alcohol
Perf. Ess. Oil. Rec.; through *J. Soc. Chem. Ind.*, 42 (Aug. 31, 1922), 647A

Speyer, E., and Co-workers
Hydrogenated thebaine product
Chem. Ztg.; through *J. pharm. chim.*, 26 (Aug. 1, 1922), 117

Staub, H.
Cumulative action of strophanthin
Schweiz. med. Wsch.; through *Pharm. J.*, 109 (Aug. 19, 1922), 200

Stehle, R. L., and Bourne, W.
Anesthetic properties of pure ether
J. Am. Med. Assoc.; through *Am. J. Pharm.*, 94 (Sept. 1922), 608

Taschenberg, E. W.
Antipyretic action of dulcin
Dtsch. med. Wsch.; through *Pharm. Ztg.*, 67 (Aug. 16, 1922), 681

Traut, E. J., and Vahlteich, H. W.
Pepsin assays
J. Am. Pharm. Assoc., 11 (Sept. 1922), 686

Utz
Detecting arsenic in glycerin
Dtsch. Parf. Ztg.; through *Pharm. Ztg.*, 67 (Aug. 9, 1922), 659

Van Leeuwen, W. S., and Von Zent-Gyorgy, A.
Scopolamine-morphine narcosis
J. Pharm. Exp. Therap.; through *Pharm. J.*, 109 (July 22, 1922), 67

Van Tussenbroek, M. J.
Decolorizing vegetable oils

Chem. Weekbl.; through *J. Soc. Chem. Ind.*, 41 (July 31, 1922), 557A

Von Braun, J., Braunsdorf, O., and Räth, K.

Pharmacology and structure of benzoic and tropic esters of alkylamines

Ber.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 608A

Watson, E. R.

Preparation of deodorized alcohol

J. Indian Ind. and Lab.; through *Pharm. J.*, 109 (July 29, 1922), 94

Witt, J. C.

Permanganate oxidation of oxalic acid

J. Phys. Chem.; through *J. Soc. Chem. Ind.*, 41 (Aug. 15, 1922), 609A

CLINICAL AND DIAGNOSTIC METHODS.

Cross, H. B.

Stain for leukocytes

Johns Hopkins Hosp. Bull.; through *Am. J. Pharm.*, 94 (Aug. 1922), 544

Labbé, H., Nepreux, F., and Nomidis, M.

Study of the Bang test for reducing matter in the blood

J. pharm. chim., 26 (July 16, 1922), 49

Lindner, G. C.

Urinary excretion of potassium iodide in health and disease

Quart. J. Med.; through *Pharm. J.*, 109 (Aug. 19, 1922), 200

Livingston, J.

Sugar test

Brit. Med. J.; through *Am. J. Pharm.*, 94 (Sept. 1922), 613

Loele, W.

Extract of Arion rufus in the Wassermann reaction

Münch. med. Wsch.; through *Pharm. Ztg.*, 67 (Aug. 16, 1922), 681

Lublin

Micro-chemical detection of acetone and oxybutyric acid in urine

Klin. Wsch.; through *Pharm. Zent.*, 63 (Aug. 3, 1922), 403

Meillère, G.

Isolating gallic acid from urine

Pharm. Ztg., 67 (Aug. 16, 1922), 681

Morris, J. L., and Macleod, A. G.

Assay of uric acid in blood

J. Biol. Chem.; through *Pharm. Weekbl.*, 59 (Sept. 2, 1922), 928

Roaf, H. E.

Is urochrom a chlorophyl derivative?

Biochem. J.; through *Pharm. Weekbl.*, 59 (Aug. 26, 1922), 911

Schumm, O.

Detection of small amounts of lead in urine

Z. physiol. chem.; through *Pharm. J.*, 109 (Aug. 5, 1922), 158

Shohl, A. T., and Pedley, F. G.

Rapid assay of calcium in the blood

J. Biol. Chem.; through *Pharm. Weekbl.*, 59 (Sept. 2, 1922), 929

Stepp, W., and Fuelgen, R.

Acetaldehyde a constituent of normal urine

Z. physiol. Chem.; through *Pharm. J.*, 109 (Aug. 5, 1922), 158

Utz, F.

Blood examination

Pharm. Zent., 63 (Aug. 17, 1922), 425

Weiss

Detecting occult blood

Dtsch. med. Wsch.; through *Pharm. Zent.*, 63 (Aug. 17, 1922), 432

MISCELLANEOUS.

Anon

Caseine cement

Chem. Trade J.; through *Pharm. J.*, 109 (Aug. 19, 1922), 200

Holmes, E. J.

Habits of slugs

Pharm. J., 109 (Aug. 26, 1922), 211

ALCOHOL BONDING.

It is reported that a new T. D., relating to alcohol bonds, was proposed including the so-called "25 percent forfeiture" clause, and it is said that this ruling was prepared in the Prohibition Unit, but because of protests from the drug trade it has been held up.

EXTENSION GRANTED IN CHEMICAL FOUNDATION SUIT.

A thirty-day extension has been allowed the Chemical Foundation in the time for filing its answer to the government's suit in equity for the return of patent holdings to the Alien Property Custodian.

The Foundation asked the extension on the ground that because of the voluminous record in the government's bill more time was needed to go over it and prepare the answer.

SIXTY-SEVENTH CONGRESS ENACTED 295 PUBLIC LAWS.

The second session of the Sixty-seventh Congress convened December 5, 1921, and adjourned after 245 calendar days, exclusive of Sundays and holidays. Two hundred and ninety-five public laws were enacted. The number of bills introduced in the House was 3498; in the Senate, 1249.

COUNCIL BUSINESS

MINUTES OF THE SECOND MEETING OF THE COUNCIL FOR 1921–1922.

The second meeting of the 1921–1922 Council was held at the Statler Hotel, Cleveland, Ohio, August 14, 1922.

The meeting was called to order at 9:30 A.M., Chairman LaWall presiding. The following members were present: Messrs. Beal, Day, Diner, DuMez, Dye, Eberle, Godding, Hilton, Jones, Kelly, Koch, LaWall, Lyman, Sayre, Snow, Spease, Wimmer, Whelpley, Youngken and Zeigler.

As the minutes of the previous meeting were published in the JOURNAL,* their reading was dispensed with.

The report of the Secretary of the Council was read and approved.

REPORT OF THE SECRETARY OF THE COUNCIL.

Members of the Council:

The Council as constituted at present consists of forty-three members. Three of the Local Branches have failed to elect Council Representatives, namely: The Havana Branch, the Luzerne (Wilkes-Barre) Branch and the Birmingham Branch. No new branches were established during the year.

Several changes in membership have been made since Council Letter No. 1 was sent out. They are as follows: E. F. Kelly of Baltimore, Maryland, has succeeded H. M. Whelpley of St. Louis, Missouri, as *ex-officio* member of the Council, the latter having resigned as Treasurer of the Association and the former having been elected to fill the vacancy; Francis E. Bibbins was elected Council Representative of the Indianapolis Branch to succeed Frank R. Eldred; and Jacob Diner was elected Council Representative of the New York Branch to fill the vacancy caused by the resignation of Jeannot Hostmann.

The three members of the Council for 1922–1923, elected by mail, are: Charles E. Caspari of St. Louis, S. L. Hilton of Washington, D. C., and W. L. Scoville of Detroit.

As heretofore, the business of the Council between annual meetings has been conducted by means of the Council Letters issued from time to time as the necessity arose. These were not only sent to all members of the Council, but abstracts thereof were also published in the JOURNAL where they stand as a permanent record for all who may wish to consult them. As additional business should be mentioned the fact that the Executive Committee met in Washington, D. C., February 25, 1922, to consider plans for the reorganization of the Association as directed by the Council at New Orleans last year. The results of this meeting have been published in the JOURNAL and will be dealt with further in the report of the Executive Committee.

During the interim between the first meeting of the Council held in New Orleans, September 9, 1921, and this, the second meeting, there were issued 18 Council Letters covering 50 pages and 37 motions. Eighteen of these motions deal with the election of active members, a total of 478 having been elected. A synopsis of all motions is attached hereto.

A. G. DUMEZ.

Synopsis of Motions of the Council for 1921–1922.

Motion No. 1 (Item 3). Election of active members Nos. 2 to 17, inclusive. Carried.

Motion No. 2 (Item 7). Moved that $500 be appropriated for the House of Delegates to cover printing, postage and clerical services for the year. Carried.

Motion No. 3 (Item 8). Election of active members Nos. 18 to 26, inclusive. Carried.

Motion No. 4 (Item 10). Motion to declare duly elected members designated by the Nominating Committee for the committees not reported on at Cleveland. Carried.

Motion No. 5 (Item 15). Election of active members Nos. 27 to 37, inclusive. Carried.

Motion No. 6 (Item 16). Motion to amend the report of the Nominating Committee, substituting the name of Robert R. Gerstner for that of R. W. Terry as a member of the Committee on Unofficial Formulas. Carried.

Motion No. 7 (Item 18). Motion to the effect that the request that the Association underwrite to the extent of $300 the expense of printing the "Official Catalogue of Standardized Plant Names" compiled by the American Joint Committee on Horticultural Nomenclature be not granted. Carried.

Motion No. 8 (Item 22). Motion that a bond of $15,000 be placed on Treasurer

* JOUR. A. PH. A., 10, 804, 1921.

E. F. Kelly with the bonding company bonding former Treasurer H. M. Whelpley. Carried.

Motion No. 9 (Item 23). Election of active members Nos. 38 to 57, inclusive. Carried.

Motion No. 10 (Item 24). Moved that the Committee on Program be instructed to confer with the Chairman and Secretary of the House of Delegates in planning the program for the annual convention. Carried.

Motion No. 11 (Item 26). Moved that the next annual meeting be held the week immediately preceding that of the American Chemical Society. Withdrawn.

Motion No. 12 (Item 28). Moved that a committee of three be appointed for the purpose of investigating the advisability of moving the JOURNAL headquarters to Washington, D. C. Ruled out of order by the Chairman.

Motion No. 13 (Item 30). Election of active members Nos. 58 to 80, inclusive. Carried.

Motion No. 14 (Item 32). Moved that the annual meeting be held the week of Aug. 14 to 19. Carried.

Motion No. 15 (Item 36). Election of active members Nos. 81 to 99, inclusive. Carried.

Motion No. 16 (Item 39). Moved that the proposed budget for 1923 submitted by the Finance Committee be approved. Carried.

Proposed Budget of Appropriations for 1922.

Appropriations for General Expenses:			
No. 1 Salaries		$6400.00	
No. 2 Printing, Postage and Stationery		1000.00	
No. 3 Clerical Expenses Secretary's Office		416.00	
No. 4 Miscellaneous Expenses		200.00	
No. 5 Stenographers		350.00	
No. 6 Traveling Expenses		500.00	
No. 7 Committee on Membership		500.00	
No. 8 Committee on Unofficial Standards		100.00	
No. 9 Year Book		5000.00	
No. 10 Premium on Treasurer's Bond		62.50	
No. 11 Auditing Treasurer's Books		80.00	
No. 12 National Drug Trades Conference		200.00	
No. 13 Section on Scientific Papers		25.00	
No. 14 Section on Education and Legislation		25.00	
No. 15 Section on Commercial Interests		25.00	
No. 16 Section on Practical Pharmacy and Dispensing		25.00	
No. 17 Section on Historical Pharmacy		25.00	
No. 18 Women's Section		50.00	
No. 19 National Syllabus Committee		25.00	
No. 20 Committee on Recipe Book		50.00	
No. 21 Committee on Local Branches		25.00	
No. 22 Drug Trade Board of Public Information		250.00	
No. 23 War Veterans' Section		50.00	
No. 24 House of Delegates		500.00	
		$15,883.50	$15,883.50
Appropriations for Open Accounts:			
No. 25 Journal		$11,000.00	
(*a*) Publication	9,500.00		
(*b*) Clerical expenses	1,000.00		
(*c*) Postage and stationery	300.00		
(*d*) Freight, Drayage, Misc	200.00		
No. 26 National Formulary		1,000.00	
No. 27 Badges and Bars		50.00	
No. 28 Certificates		50.00	
		$12,100.00	12,100.00
			$27,983.50

Motion No. 17 (Item 41). Moved that the plan of procedure submitted by the Committee on Headquarters Building be approved. Carried.

Motion No. 18 (Item 43). Moved that the 1919 Year Book be distributed to the 185 members who were elected after July 1, 1921, although the dues paid applied to 1922. Carried.

Motion No. 19 (Item 44). Election of active members Nos. 100 to 149, inclusive. Carried.

Motion No. 20 (Item 50). Election of active members Nos. 150 to 184, inclusive. Carried.

Motion No. 21 (Item 53). Moved that $200 be appropriated for the Committee on Headquarters Building to cover printing, stationery, postage, etc. Carried.

Motion No. 22 (Item 54). Motion to give Treasurer E. F. Kelly right of access to and control of the contents of the safety deposit vault of the Association. Carried.

Motion No. 23 (Item 56). Election of active members Nos. 185 to 193, inclusive. Carried.

Motion No. 24 (Item 60). Election of Secretary of the Section on Historical Pharmacy to fill the vacancy caused by the death of A. W. Linton. Clyde L. Eddy elected.

Motion No. 25 (Item 62). Election of active members Nos. 194 to 213, inclusive. Carried.

Motion No. 26 (Item 66). Election of active members Nos. 214 to 233, inclusive. Carried.

Motion No. 27 (Item 68). Motion to present to the Hygienic Institute of Prague, Czecho-Slovakia, a set of the Proceedings and Year Books of the Association. Carried.

Motion No. 28 (Item 69). Election of active members Nos. 234 to 253, inclusive. Carried.

Motion No. 29 (Item 72). Motion to present to the British Museum Volumes 58 and 59 of the Proceedings and Volumes 1 to 8 of the Year Book. Carried.

Motion No. 30 (Item 74). Election of active members Nos. 254 to 277, inclusive. Carried.

Motion No. 31 (Item 77). Election of active members Nos. 278 to 307, inclusive. Carried.

Motion No. 32 (Item 79). Moved that an additional $10 be appropriated for the Scientific Section. Carried.

Motion No. 33 (Item 81). Election of active members Nos. 308 to 357. Carried.

Motion No. 34 (Item 85). Motion to approve the program for the Cleveland meeting submitted by the Committee on Program. Carried.

Motion No. 35 (Item 86). Election of active members Nos. 358 to 390. Carried.

Motion No. 36 (Item 89). Election of active members Nos. 391 to 430, inclusive. Carried.

Motion No. 37 (Item 91). Election of active members Nos. 431 to 478, inclusive. Carried.

The report of the Committee on Publication was read by the Chairman of the Committee. It was moved and carried that the report be received and that the actions reported therein be approved.

REPORT OF THE COMMITTEE ON PUBLICATION.

The Committee on Publication respectfully submits the following report on matters pertaining to the publications of the Association for the period January 1, 1921, to date.

Journal: The total expenditures incurred in getting out the JOURNAL in 1920, including the editor's salary, were $14,041.40 ($10,291.40 plus $3,750.00). The total expenditures for 1921 were $15,685.96 ($11,935.96 plus $3,750.00), which represents an increase of $1644.56.

The total receipts of the JOURNAL for advertising, reprints, etc., in 1920 were $9,003.95. In 1921, they were $8,412.02, a decrease of $591.93.

The increase in the net cost of the JOURNAL is to be attributed mainly to the higher rate of wage received by labor when the 1921 contract was let and to the decrease in income received from advertising. It is doubtful if wages will be lowered very much for some time to come, but we should be able to overcome the loss in advertising if all of our members will exert a little personal effort in inducing people to advertise with us.

The contract for printing, mailing, etc., of the JOURNAL for 1922 was again awarded to the Eschenbach Printing Company of Easton, Pennsylvania. The contract was renewed on January 3, 1922, at the same terms granted in 1921, except that the cost of paper, press work and binding is reduced from $0.10 to $0.08 per page per hundred.

As the Committee was not entirely satisfied with these terms, a number of other firms were asked to bid on this work. Two of these firms, The Printing Products Corporation of Chicago, Illinois, and the Stoneman Press Company of Columbus, Ohio, offered to do the work at a lower rate, but not sufficiently low to warrant the making of a change.

Journal Activities: In the past year, the reports and papers read at the annual convention were published in large part in the first six numbers of the JOURNAL following the convention,

thus giving space for other material. This material has been supplied in the form of additional articles of scientific and practical interest which will, it is hoped, tend to increase the interest in the JOURNAL.

The publication of the Bibliography of Pharmaceutical Research compiled by the Reporter on the Progress of Pharmacy has been continued throughout the year and has received much favorable comment. Formulas for the Book of Unofficial Formulas have likewise been published as rapidly as they were received.

In addition, a new department has been opened this year. This department is conducted by R. A. Lyman and is devoted to reporting matters of interest primarily to the American Conference of Pharmaceutical Faculties. While only one article appeared in this department for the year 1921, some 36 pages have been given to this department since January of this year. At present, the expense is borne wholly by the Association.

Year Book: The contract for printing, binding and distribution of the Year Book for 1920 (Vol. 9) was awarded to The Printing Products Corporation of Chicago, Illinois, on January 3, 1922. This award was made after careful consideration of all of the estimates received and after the Committee had satisfied itself to the best of its ability that this firm was capable of doing the work in a satisfactory manner. The contract price was $4195.00, exclusive of cost of distribution, based on an estimated number of 3600 copies. The total cost of the 1919 Year Book, including distribution which amounted to $456.17, was $6439.70.

This company appeared to be properly equipped to get out the work in good shape and do it speedily. Professor Arny forwarded the manuscript on January 18, 1922, and it was expected that the book would be in your hands by the middle of May at the latest. Much to our disappointment, this expectation has not been realized, but the books are definitely promised for this week.

National Formulary: The number of copies of the National Formulary IV sold during 1921 was 3906. The stock on hand December 1, 1921, was 1601 copies. The total sales up to December 1, 1921, were 36,901 copies. Details relative to the distribution of the book will be included in the report of the General Secretary, while data pertaining to the receipts and expenditures will be reported by the treasurer.

The number of copies sold in 1921 was slightly greater than that for 1920 in spite of the fact that the time for getting out the new edition is drawing nearer. No doubt, the advertisement which has been carried in the JOURNAL has helped to keep up these sales. At any rate, it should be continued.

Permission to Use N. F. Text: Permission was granted to the following to use portions of the National Formulary text in the preparation of books: Blakiston's Son & Company in the publication of a textbook on pharmacognosy by Professor Heber W. Youngken; William Wood & Company in the preparation of a new edition of the "Reference Handbook of Medical Sciences;" and Chester A. Struby, of Macon, Georgia, for a book on practical pharmacy. In each case, with the exception of the last, a nominal fee of $10 was charged. Mr. Struby was charged a fee of $50 because of the comparatively large amount of the text which he desired to quote verbatim.

Book of Unofficial Formulas: The Chairman of the Publication Committee conferred with the Chairman of the Committee on Unofficial Formulas as directed by the Council at New Orleans last year relative to the work which still remains to be done before preliminary steps can be taken in the publication of the Book of Unofficial Formulas. As a result, it may be stated that there is still a comparatively large amount of work to be done before the preparation of the manuscript can be begun. More formulas for certain classes of preparations must be collected, and those now in hand must be classified and edited. Definite recommendations for the continuance of the work are included in the report of the Committee on Unofficial Formulas.

Donations of Copies of Proceedings and Year Book: The Committee, on approval by the Council, directed Secretary Day to furnish copies of the Proceedings and Year Books gratis to the following: A full set of Proceedings and Year Books to the Hygienic Institute of Prague, Czecho-Slovakia; Volumes 58 and 59 of the Proceedings and Volumes 1 to 8 of the Year Book to the British Museum, London.

(Signed) J. H. BEAL, WM. B. DAY,
E. F. KELLY, E. G. EBERLE,
A. G. DUMEZ, *Chairman.*

The report of the Editor of the JOURNAL was read as the next order of business. It was moved and carried that the report be received and take the usual course.

REPORT OF THE EDITOR OF THE JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

Members of the Council:

In the report of last year the Editor stated that in 1920 the Association had the advantage of a contract made in 1919; it was indicated that the prevailing scale of wages would affect the contract for 1921. We were fortunate in being able to offset the larger expenses during 1920 by a larger income. It will interest you, at least it is always a source of study for the Editor to figure out how he will keep down the net expenses of publishing the JOURNAL. This was an impossibility during 1921 for reasons already given—that the higher wage scale, effective in 1920, would apply to us in 1921. A survey will show that the printers' wage scale has more than doubled during the last six years. This shows up in the cost of publishing the JOURNAL.

In 1916 the total publication costs were $4,413.13; in 1919, $6,306.33; in 1920, $7,597.11. During the latter year, as stated in last year's report, we had the advantage of the wage scale of 1919. The prevailing scale, however, obtained during the period of this report and, as a result, our publication costs for 1921 amount to $9,285.74. For example, in 1920 we paid $1.66 per page for type matter that in 1921 costs $2.32, or an advance of 40 percent, and this rate of increase applies through publication costs. As there was very little reduction in the price of paper in 1920, when the contract for 1921 was made, the indications were for an advance in net costs of $2,500, or more in 1921 over 1920. This has been held down to $2,236.49.

It is probably safe to say that the scale of printers' wages will not be materially reduced for some time; however, there is a lower price on paper of which we have the advantage in the *present* contract. In a monthly report to the Publication Committee, following the acceptance of the contract *last December*, the Editor stated that under the contract made and the proviso that our advertising would hold up, the net cost of the JOURNAL, compared with last year, could be lowered by $50 per month. So far the calculation has proved correct, we have reduced the net cost per month by slightly more than that amount, up to August. It will be possible to continue to do so, provided our income holds up and the number of copies remains the same. Every member of the Association can do something to make this effective by expressing appreciation to the patrons using the JOURNAL as a publicity medium for their messages to reach the drug trade, and by encouraging others to make use of our publication.

Coming back to the cost of the JOURNAL, it should not be overlooked that we are now (up to August 1922) printing 3,800 copies monthly, and that in the cost estimate the JOURNAL is not credited with the subscriptions of members nor any part of these. If this were done the JOURNAL would represent an asset. So that you may have an idea of what can be expected from the JOURNAL this year, under the proviso given: the receipts of the JOURNAL for last year (1921) up to August 1 were $5,042.43; for this year (1922) same period, $5081.18; the expenses of the same period last year (1921) were $6,793.32; this year (1922) $6,186.14.

Some of the foregoing remarks will apply in making a comparison of the receipts and expenses of 1920 and 1921.

While the JOURNAL did not very largely benefit by the general increase in advertising during 1920 there was an increase as shown by the comparison of 1919 and 1920 receipts in last report—receipts from advertising in 1919 amounted to $5,229.50 and in 1920, $7,742.62, a gain of $2,500. In 1921 there was less advertising generally and, as a result, our receipts too from advertising in 1921 were less.

The total receipts of the JOURNAL in 1920 were $9,003.95, of which $7,742.62 came from advertising; $547.36 from JOURNAL subscriptions, bound volumes and single copies; $704.98 from reprints, and $1.74 from type cuts. The total receipts of 1921 were $8,412.02, of which $7,421.92 represents advertising business; $554.61 subscriptions, bound volumes, single copies, etc.; $704.98 reprints; and $1.74 type cuts. The shortage in receipts of $591.93 was principally due to less advertising.

The total expenses were low in 1920; as already explained we had made a favorable contract—instead of paying the prevailing scale of 1920 we paid that of 1919, the publication cost of that year, $7,597.11, became $9,285.74 in 1921. The increase in the scale was nearly 40%. The total expenses of 1920, exclusive of the Editor's salary, were $10,291.40; the clerical expenses amounted to $873.95; reprint costs, $475.85; office postage, $169.09; stationery and office sup-

plies, $67.97; publication costs and *all incidental* expenses therewith amounted to $8,705.44. The total expenses of the JOURNAL for 1921 under like conditions were $11,935.95; clerical expenses amounted to $891.85; reprint costs $347.90; office postage, $166.61; stationery and office supplies, $99.33; publication costs and *all incidental* expenses therewith, $10,430.25. The office expenses have remained about the same, but the publication costs increased $1,724.81. This increase is less than that calculated for in last report; in other words, the Publication Committee was conservative in its estimate which was carefully made. The reduction in publication costs should this year (1922) be about $500.00, the office expenses will remain about the same. The JOURNAL in 1920 cost about $1.70 per member; in 1921, about $2.10; the indications are that in 1922 the cost will fall somewhat below the latter figure.

For your information I am repeating the statement in other annual reports, which applies at this time:

"Vouchers and accounts for all expenses are sent to the General Secretary where voucher check is drawn which passes the inspection of the Finance Committee; the Editor is not reimbursed for items that we pay for until the account has been examined and approved; duplicates of all accounts are herewith presented. Each month the Editor makes a report to the Publication Committee which includes all of these items and reference to the month's work and prospects. Remittances are made payable to the American Pharmaceutical Association and sent to the Treasurer; a remittance letter covering every item goes with them, and carbon copies of these remittance letters, with Treasurer's receipt, are herewith presented. There is, further, a complete transcript of receipts and expenses for the year, month by month, and in schedule form, so from any and every viewpoint comparison can be made and items checked.

"We followed the instructions heretofore given relative to the JOURNAL. Every officer of the Association, Section Chairman, officers of some Committees of the Association, and officers of closely associated bodies annually meeting with us, were several times during the year invited to contribute an editorial; some responded; others did not come forward with a message. To all of them, whether the response was made or encouragement offered, the editor desires to extend sincere thanks; also to the officers and all the members of the Publication Committee."

Following the suggestion of the American Conference of Pharmaceutical Faculties a Department was opened in the JOURNAL, January 1922, conducted by Chairman R. A. Lyman of the Executive Committee A. C. P. F. An editorial on the subject appeared December 1921, p. 927. For the eight months, January to August, inclusive, about 35 pages have been given to the Department. The highest number of pages in any issue was seven, averaging somewhat over four pages monthly.

Only about three pages of Pharmaceutical Formulas proposed for "Unofficial Formulas, A. Ph. A." have been printed since last report, but practically all formulas in the JOURNAL office have been published. Economically, it is best to have two or more pages of copy for an issue. The Chairman of the Committee, J. Leon Lascoff, and Chairman A. G. DuMez will, doubtless, consider the subject in their respective reports.

The value of the Bibliography of Pharmaceutical Research conducted by the Reporter on the Progress of Pharmacy, H. V. Arny, has been recognized not only by our members but those in other related organizations, here and abroad. Unquestionably it is a valuable department of our JOURNAL.

We are pleased with the coöperation of various divisions of the U. S. Department of Agriculture; the papers and reports from those engaged in the laboratories have contributed largely to the service rendered to pharmacy and in a general way to science.

The JOURNAL for 1921 included over 1,000 reading pages; the number of copies mailed monthly averaged about 3600; at the present (up to August 1922) we are printing 3800 copies. Last year, we contended with a printers' strike; this year we have been free from such troubles and the publishers of the JOURNAL have their force well reorganized. We take this opportunity of expressing satisfaction with their services.

A publication that can practically guarantee a circulation of 3800 with little waste publicity, can be commended to advertisers, and we desire to express thanks to those who have made use of the JOURNAL as patrons and also to the members who have exhibited an interest in furthering its possibilities in that direction.

Prof. Herbert W. Hess of the Wharton School of Finance and Commerce said of advertising: "It is one of the creative mechanisms of our day, involving individual and group aspirations. It is at once master and servant of those who wield its power. It is a master when it sets the energy impulse of man toward realization of wishes, desires and wants. It is a servant of the individual advertiser when, through its form, it speaks the right word at the right time, in the right place, and in the right mood." It is a point of contact and the JOURNAL can serve. Recently I said in an editorial: "The vision of professional men and others engaged in the industries is broadening—there is a growing realization of their opportunities and that better results follow their work with more intimate knowledge of what is needed in practice and of what the laboratories produce; that they are coöperators, and the professions do not lose standing by such contact; one is essential to the other—application cannot precede production, and production is useless unless use is made of the product."

There is mutual benefit in team-work, and we hope the Section on Practical Pharmacy and Dispensing will aid in establishing a Department in the JOURNAL, the usefulness of which the hospital pharmacists will help to promote.

In expressing my deep appreciation of the confidence and favor bestowed by the members of the Association, I hope my services have your approval.

Thanking you, and through you the membership,

Respectfully submitted,

E. G. EBERLE, *Editor.*

The Secretary of the Council read the report of the Committee on Unofficial Formulas which was forwarded by Chairman Lascoff.

It was moved and carried that this report be received, that the chairman of the committee be empowered to appoint an editing committee, and that the recommendation with reference to the appointment of additional retail pharmacists on the committee be referred to the incoming chairman of the Council.

REPORT OF THE COMMITTEE ON "UNOFFICIAL FORMULAS."

By Chairman J. Leon Lascoff.

On September 24th, the Chairman received a letter from Dr. A. G. DuMez, in which he states that the Publication Committee, in its report made at the first session of the Council held in New Orleans on September 6, 1921, recommended that initial steps be taken at this time looking toward the publication of the first edition of the "Book of Unofficial Formulas." He further stated that the Council in acting upon this recommendation ordered the Chairman of the Publication Committee (A. G. DuMez) to take up the matter with the Chairman of the Committee on Unofficial Formulas, with a view to determining the exact state of progress of this work, and making a definite report to the Council at some future date.

I immediately sent out the following letter to all the members of the Committee:

"I am in receipt of a letter from Dr. A. G. DuMez, Chairman of the Publication Committee, advising me of the action taken at the New Orleans meeting by the Council of the A. Ph. A. with regard to the publication of the 'Book of Unofficial Formulas.'

"Will you not, therefore, coöperate by sending to me as soon as possible, such formulas as you may have to suggest for incorporation in this publication? I am anxious to make an early and comprehensive report to Dr. DuMez, and trust you will support me in this endeavor.

"Awaiting such suggestions and information as you may wish to supply, I am,

Sincerely yours,"

Quite a number of replies were received. A few members sent formulas which appeared in print, and others were rejected by the Chairman.

The following suggestions were received from the members:

Prof. W. L. Scoville suggests that all deletions from the N. F. should be included in the recipe book. He also suggests that a chapter on the "Choice and Use of a Camera" would make an estimable addition to the book.

I. A. Becker submitted a number of formulas on "Photography," and a publication by the Eastman Kodak Co., on "Studio Light." Same was published in our JOURNAL.

Ivor Griffith advises that, due to an illness with which he was confined to the hospital, he was unable to furnish us with any formulas.

P. Henry Utech submitted a paper by Mr. Ralph Foran on the making of "Sulphated Potassa" as employed in the making of "Lotio Alba" extemporaneously. This has been published.

F. W. Nitardy suggests that acetic acid is a good solvent for many plant constituents, and makes several very admirable fluidextracts; it is of course not applicable to all drugs; some, because the active constituents are not satisfactorily extracted by acetic acid, and in some instances because the amount of inert material extracted along with active constituents is objectionable. He promised to send some formulas in the near future.

A number of formulas were submitted by W. L. Gray which are also ready for publication. The Chairman presented a number of formulas, also a paper on "Saturated Solutions."

Dr. Bernard Fantus sent a number of formulas on "Tablets," which were published in the JOURNAL.

Prof. C. P. Wimmer says that he believes real progress has been made during the past year. He is in favor of an editing committee of about four or five.

J. K. Thum suggests that as the Book of Unofficial Formulas was a child of the brain of Prof. H. P. Hynson, of Baltimore, some mention be made of this fact in the preface of the work.

Dr. F. B. Kilmer replies that he has no additional formulas to suggest, but will be pleased to criticize the formulas submitted by others.

Prof. L. D. Havenhill reports progress for his committee. He believes that the work of the entire Committee is advancing very well, and that the selection and proving of formulas is a matter requiring time. He suggested that the Association allow the Committee another year in which to make trials and selections.

I am in favor of prompt publication of this book. The titles of the preparations must be carefully studied, and synonyms should accompany what might be termed "Official Titles." The work of sorting the formulas according to class is being done. There are a number of formulas for which the titles have not as yet been decided upon; forty-two classes are represented by about 600 formulas.

The Chairman made a trip to Philadelphia and had an interview with Editor Eberle. He also went to Washington where he held conference with Dr. DuMez. It was decided to have a Card System for the formulas, and to index them all alphabetically. This work is now being done. The work of sorting the formulas according to class is also progressing.

With the addition to our book of forty-two galenicals which will be deleted from the N. F., also galenicals from the old editions of the Pharmacopoeia and National Formulary will make this recipe book most valuable for the pharmacist.

I recommend that an editing committee be appointed. I also recommend to place on the Committee a few retail pharmacists, who conduct *prescription pharmacies*, to help us with some special formulas for which pharmacists have frequent calls.

In conclusion I wish to thank the members of the Committee for the valuable assistance they have rendered, and Dr. DuMez and Editor Eberle for their valuable suggestions.

Respectfully submitted,

J. LEON LASCOFF,

Chairman, Committee on Unofficial Formulas.

Prof. J. H. Beal reported that the Committee on Proprietary Remedies had no definite report to make at this time, although the Committee had done some work. The Committee had hoped to report on hair preparations containing lead, but the material could not be gotten ready in time.

Prof. Heber W. Youngken, Chairman of the Scientific Section, requested that an extra session be provided for the section on Thursday afternoon, 1 :30 to 4 :00. It was moved and carried that this request be granted.

Applications Nos. 468, 470 and 479 to 582, inclusive, for active membership in the Association were presented for a vote. It was moved and carried that the Secretary be instructed to cast an affirmative ballot for the election of these applicants. The vote was cast.

Prof. E. F. Kelly brought to the attention of the Council the fact that the National Association of Boards of Pharmacy had expressed disappointment because a joint meeting with the American Conference of Pharmaceutical Faculties had not been arranged for Tuesday. After

discussion by Messrs. Koch, Dye, Day, Hilton, Beal and Jones, it was moved that the General Secretary, Secretary of the Council, the Local Secretary and Prof. R. A. Lyman be instructed to confer with the Secretary of the National Association of Boards of Pharmacy with a view to arranging this matter to the satisfaction of the Boards.

It was moved and carried that the meeting adjourn. The time of adjournment was 10:40.

A. G. DuMez, *Secretary.*

MINUTES OF THE THIRD MEETING OF THE COUNCIL FOR 1921–1922.

The third meeting of the 1921–1922 Council was held at the Hotel Statler, Cleveland, Ohio, August 14, 1922.

The meeting was called to order at 10:00 P.M., Chairman LaWall presiding.

The following members were present: Messrs. Arny, Beal, Bibbins, Caspari, Day, Diner, DuMez, Dye, Eberle, Frost, Godding, Griffith, Hilton, Holton, Kelly, Koch, LaWall, Lyman, Rudd, Sayre, Snow, Wimmer, Whelpley, Youngken and Zeigler.

The minutes of the second meeting were read and approved.

Applications Nos. 583 to 590, inclusive, were presented for a vote. It was moved and carried that the Secretary be instructed to cast an affirmative ballot for the election of these applicants. The ballot was so cast.

The report of the Executive Committee on a plan for improving the present form of organization and methods of procedure of the Association was read. Typewritten outlines of a tentative plan were distributed to the members present to facilitate discussion.

REPORT OF THE EXECUTIVE COMMITTEE OF THE COUNCIL ON A PLAN FOR IMPROVING THE FORM OF ORGANIZATION AND METHODS OF PROCEDURE OF THE A. PH. A.

CLEVELAND, August 13, 1922.

The Executive Committee, in accordance with the instructions received at New Orleans, September 7, 1921, has made a thorough study of the present organization of the A. Ph. A. and submits the following tentative plan for improvements in the form of organization and methods of procedure.

PLAN ATTACHED.*

The plan as here presented is the result of a careful study of the shortcomings of our present form of organization and of the remedies which have been suggested for improvements. In addition to the work carried on by correspondence, the Committee has held two meetings at which all phases of the subject were fully discussed. The first meeting was held in Washington, D. C., February 25, 1922. At this meeting a tentative plan was drawn up and submitted to the members of the Association through the JOURNAL* for criticism and discussion. A second meeting was held here on the 13th instant. At this meeting, the published plan* was gone over and alterations, in keeping with the criticisms and suggestions received, made. At this meeting, the Committee also profited by the recommendations of Professor Beal, who was unable to attend the meeting held in Washington.

In addition to the alterations in the plan as published in the JOURNAL, the Committee believes that the statement relating to the conditions under which the plan should become operative in the event of its adoption as published in the JOURNAL should be altered to read as follows: "It is intended that this plan shall be made operative only after a certain number of state associations, say 20, have given definite notice of their acceptance and that they will come in with at least 51 percent of their membership."

Signed by members of Executive Committee.

Dr. Jacob Diner stated that he was instructed by the New York Branch to oppose any change in the present form of organization which would not give the local branches representation in the House of Delegates.

Chairman LaWall suggested that the first matter to decide was whether or not it was desirable to enlarge the Association as contemplated in the plan presented or to restrict it to its present compact form.

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* For original draft see April JOUR. A. PH. A., 1922, pp. 268 and 269; for changes and action see Council Minutes of August 15, and Minutes of General Sessions in September JOURNAL; plan as approved is also printed in the latter issue, pp. 724 and 725.

At the request of the Chairman, Prof. E. F. Kelly explained the proposed plan and stated the reasons for presenting a plan of this nature. Other members of the Executive Committee were also called upon to state their reasons for favoring the plan. The subject was then opened for general discussion.

The discussion which ensued was taken part in by practically every member present and consumed more than an hour.

It was finally moved by Prof. J. H. Beal, and carried, that the proposed plan be discussed seriatim.

Inasmuch as the hour was almost 12:00 midnight, it was moved and carried that this be made the first order of business at the next meeting.

The meeting adjourned at 11:50 P.M.

A. G. DuMez, *Secretary.*

MINUTES OF THE FOURTH MEETING OF THE COUNCIL FOR 1921–1922.

The fourth meeting of the 1921–1922 Council was held at the Hotel Statler, Cleveland, Ohio, August 15, 1922.

The meeting was called to order at 8:15 P.M., Chairman LaWall presiding.

The following members were present: Messrs. Arny, Beal, Bibbins, Caspari, Chase, Day, Diner, DuMez, Dye, Eberle, Frost, Godding, Griffith, Holton, Hopp, Kelly, Koch, LaWall, Lyman, Rudd, Sayre, Schaefer, Snow, Stewart, Whelpley and Wimmer.

The minutes of the previous meeting were read and approved.

Applications Nos. 591–613, inclusive, for active membership in the Association were presented for a vote. It was moved and carried that the Secretary be instructed to cast an affirmative ballot for these candidates. The ballot was so cast.

It was moved and carried that the proposed plan for improvement of the present form of organization and methods of procedure of the Association, which was the last order of business of the previous meeting, be taken up seriatim.

Before taking up the plan, however, it was moved by Prof. J. H. Beal, seconded by Prof. Wm. B. Day, that the following declaration of principles be approved:

> "That all discussions of the so-called plan of reorganization presented by the Executive Committee be with the understanding that the following propositions are accepted as binding:
>
> "1. That a reorganization of the plans and purposes of the A. Ph. A. as at present constituted is neither necessary nor desirable.
>
> "2. That the creation of other pharmaceutical societies both state and national was a natural step in the process of evolution, and that the existence of such independent organizations, all of which are either directly or indirectly the descendants of the A. Ph. A., is necessary to the proper representation of the separate branches of pharmacy which they severally represent.
>
> "3. That the A. Ph. A. is from principle opposed to any measures tending to destroy the identity or lessen the independence of these separate organizations. But on the contrary recognizes a duty to do what it legitimately can to aid in advancing their dignity, importance and usefulness.
>
> "4. That we recognize fully the great importance to the welfare of pharmacy of the harmonious coöperation of all pharmaceutical organizations, local, state and national, and believe that such harmonious coöperation can best be secured by providing for their closer relationship with each other by giving them proper representation in the working activities of the mother association of them all—the American Pharmaceutical Association."

The clauses of this declaration were considered seriatim and approved. It was then moved and carried that this declaration of principles be approved as a whole.

The plan in question was then taken up for consideration. By request of the Chairman, your Secretary read the plan. It was agreed that those items about which there was no controversy were to be considered as approved. Those items about which there was a difference of opinion were discussed and voted on separately. Finally the plan as altered was voted upon and adopted as a whole.*

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* See September JOUR. A. PH. A.

The following are the alterations made in the original plan as presented by the Executive Committee:

1. Under "Entire Membership."
   Change "privilege of voting is limited to members in good standing" to "privilege of voting is limited to dues-paid members."
2. Under "Membership of House of Delegates."
   a. Change "National Associations, 1 each to be admitted on application and after approval by the Judicial Committee" to "National Associations, to be admitted on application and after approval by the Judicial Committee, 1 each."
   b. Change "State Associations, 1 for each 500 members" to "State Associations, 1 for each 500 dues-paid members of the A. Ph. A."
   c. Add "Local Branches of the A. Ph. A. of not less than 50 dues-paid members holding not less than 6 meetings annually, and with an attendance of not less than 15 at each meeting."
3. Under "Duties of the House of Delegates."
   a. Change "Ratify committees nominated by the President and Chairman of the House" to "Ratify special committees nominated by the Chairman of the House."
   b. Make No. 6 read "Transact all general business of the Association not otherwise provided for by the Constitution and By-Laws."
4. Under "Members of Board of Directors."
   Change "Treasurer *ex-officio* without vote" to "Treasurer *ex-officio* with vote."
5. Under "Duties of the Board of Directors."
   Change "Act for House in interim between meetings" to "Act for the Association and House in interim between meetings."
6. Under "General Officers."
   a. Duties of the President—Change "Nominate standing committees and submit the names of the nominees to the House for ratification immediately after inauguration" to "Nominate standing committees and submit the names of the nominees to the Board of Directors for ratification immediately after inauguration."
   b. Duties of the Treasurer—Change "*Ex-officio* member of the Board of Directors without vote" to "*Ex-officio* member of Board of Directors with vote."
7. Under "Sections."
   Delete the sections on manufacturing and hospital pharmacy.
8. Under "Standing Committees."
   a. Make to read "Nominated by the President and ratified by the Board of Directors, unless otherwise provided for."
   b. Add Committee on Local Branches.
9. Under "Special Committees."
   Delete "Committee on Time and Place of Meeting."
10. Make statement with reference to time when plan is to be put into effect to read as follows: "In the event that this plan is approved, it is intended that it shall go into effect after 20 states have given definite notice of their acceptance and that they will come in with at least 51 percent of their membership."*

The following is a copy of the complete plan as finally approved.[1]

It was moved and carried that it be the sense of the Council that the present Constitution and By-Laws of the Association continue in effect until the adoption of the proposed plan makes necessary a revision.

It was moved and carried that the Secretary be instructed to report this plan to the General Session with the unanimous approval of the Council.

The meeting adjourned at 11:15.

A. G. DuMez, *Secretary.*

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* See Minutes for change made in General Session.

[1] See September Jour. A. Ph. A. and changes reported in these Minutes.

STATEMENT MADE BY SECRETARY OF THE COUNCIL IN REPORTING THE PLAN TO THE GENERAL SESSION.*

Inasmuch as some of the members present may not be informed with respect to the conditions which have called forth the drafting of this plan or the steps which have been taken in its perfection, a brief explanation would appear to be in order.

It will probably be recalled by many of you that in several presidential addresses attention has been called to the need of improving the form of organization and methods of procedure of the Association, and that several committees have been appointed at different times to consider this same problem. As a consequence certain changes have been made, among the most important of which may be mentioned the establishment of the House of Delegates, for the purpose of giving the state associations a greater voice in the management of our affairs. These changes have brought about a measured degree of improvement, indicating that a comprehensive study of our present plan of organization might lead to still greater improvements.

With this object in view, the Council at the third meeting held in New Orleans, September 7, 1922, instructed the Executive Committee to make a thorough study of the present organization and present a comprehensive plan for improvement at the next annual meeting.

Pursuant to these instructions, a request was sent to all members of the Executive Committee to express their views upon the general subject and to make such recommendations as appeared to them to be appropriate. In answer to this request, several plans and a number of suggestions were received. To facilitate consideration of these proposals and insure the completion of the task in the time allotted, a meeting of the Executive Committee was held in Washington, D. C., February 25, 1922.

At this meeting the subject was considered from all angles and a tentative plan was drafted and published in the April number of the JOURNAL for the purpose of eliciting comment and criticism so that the Committee might be guided thereby in its final report to the Council.

A second meeting of the Committee was held immediately preceding the opening of this convention at which consideration was given to the criticisms and suggestions received and a final report drafted which has removed the objections of those who were the strongest opponents of the tentative plan.

This report was discussed at the third and fourth sessions of the present Council and the plan proposed therein discussed in detail. The plan which I now bring before you is the result of these discussions and has the unanimous approval of the Council.

MINUTES OF THE FIFTH MEETING OF THE COUNCIL FOR 1921–1922.

The fifth meeting of the 1921–1922 Council was held at the Statler Hotel, Cleveland, Ohio, August 16, 1922.

The meeting was called to order at 8:30 P.M., Chairman LaWall presiding.

The following members were present: Messrs. Arny, Beal, Bibbins, Caspari, Day, Diner, DuMez, Dye, Eberle, Frost, Godding, Hilton, Hopp, Kelly, Koch, LaWall, Lyman, Rudd, Sayre, Schaefer, Whelpley and Wimmer.

Applications Nos. 614 to 623 were presented for a vote. It was moved and carried that the Secretary be instructed to cast an affirmative ballot for these applicants. The ballot was so cast.

The report of the Reporter on the Progress of Pharmacy was read by Prof. Arny. It was moved and carried that the report be accepted and published.

REPORT OF THE REPORTER ON THE PROGRESS OF PHARMACY 1921–1922.

This is the swan song of your present Reporter, whose resignation is now in your hands. The opportunity suggests the advisability of giving at this time an account of his six years of stewardship, as well as reporting upon the work of the past year.

1920 Year Book.

At the New Orleans meeting last year it was reported that the 1920 manuscript was finished on August 10, 1921. At the time this is written (July 26, 1922) the bound Year Book is not yet in the hands of our members although the proofs of the index were corrected and sent back to the

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* This report was not in hands of Editor at time of preparing Minutes of General Sessions for September issue of the JOURNAL, hence it is printed here.

printer on July 18th. This means that the finished book should be in the hands of the membership at the time of the Cleveland meeting.

The chronology of the book may be summarized as follows:

August 10, 1921—Manuscript completed.

Jan. 18, 1922—Manuscript sent to the printers.

Feb. 18, 1922—First galleys received from printers.

July 18, 1922—Last page proofs returned to printers.

In short, the printing of the book has taken almost seven months this year, while the printing of the 1919 Year Book took nine months.

The 1920 Year Book is the largest yet printed by the Association, the Report on the Progress of Pharmacy covering 692 pages; the largest Year Book up to this time having been that of 1914 with 651 pages given to the Report on the Progress of Pharmacy. Comparison as to size of the last seven Year Books (at least that part containing the Report on the Progress of Pharmacy) may be in order.

Year.	Pages.	Abstracts.	New remedies.	Total items.
1914	651	1421	292	1713
1915	412	1051	100	1151
1916	426	1020	399	1419
1917	499	1290	227	1517
1918	557	1355	460	1815
1919	566	1560	181	1741
1920	692	1630	600	2230

Analyzing this table it will be noted that the 1915 Year Book, the first prepared by the present Reporter, was the smallest, the paucity of material being largely due to the lack of European journals because of the war. It will further be noticed that while the number of pages increased 66 percent from 1914 to 1920, the number of items increased during the same period 98 percent; hence the increase in size of the successive Year Books is not due to the increased lengths of abstracts.

A serious question, however, is the added cost due to the increasingly larger volumes each year. A problem that might well be considered by the Publication Committee and by the membership at large is whether the Year Book like the monthly Bibliography appearing in the JOURNAL should be limited to papers showing original work.

If this were done the following pages might be omitted from the 1920 Year Book.

Year Book pp.	Topics.	Pages saved.
2–61	General subjects, such as U. S. P. Education, Legislation History, Commerce, Literature, etc.	60
200–250	General Materia Medica (50 percent of these items)	25
380–382	Commercial Chemistry	3
451–461	General Organic Chemistry (25 percent of these items)	3
	Total	91

1921 Year Book.

While the 1920 Year Book was completed on August 10th last year, the 1921 manuscript is not ready this August, I am indeed sorry to say. All of the material will, however, be ready for the final editing by October first and I will at this time assume responsibility for this task, turning all of the 1921 material over to my successor at this time for his final editing.

Collaborators.

Each year the number of volunteer abstractors has steadily increased. During the past year your Reporter started a "drive" among the Conference Schools and as a result, in the preparation of the 1921 material, almost every Conference School has had a part. The thanks of the Reporter and of the Association are due to the co-workers.

Journals for Abstracting.

In the 1921 report was given a list of foreign journals that were upon the exchange list of the JOURNAL and the Year Book. Having made satisfactory arrangements with some of our

members for abstracting Scandinavian, Italian and Spanish journals, your Reporter corresponded with the publishers of these publications and as a result the following are now upon our exchange list: *Chimie & Industrie; Revista del Colegio Farmaceutico, De La Habana; Farmaceutisk Revy; Svensk Farmaceutisk Tidskrift; Recueil des Travaux Chimiques des Pays-Bas.*

Monthly Bibliography.

Each month a bibliography of research of interest to pharmacists has appeared in the JOURNAL. This year no requests have come to the Reporter for abstracts of the papers thus listed. The views of your Reporter upon this phase of his work will appear elsewhere.

Conclusion.

In laying down the position that he has had the privilege of occupying during the past six years, it is with a feeling of regret that certain matters of private nature make it necessary for him to relinquish a highly congenial task and to sever most delightful associations. Your Reporter's views on the inestimable value of the Year Book, views that have become stronger year by year for the past thirty years, are too well known to require reiteration. He has been glad to do what he could to keep up the great work of Professor Diehl. He will always be ready in a private capacity to assist those who conduct the Year Book in the future.

Respectfully submitted,

H. V. ARNY,

Reporter on the Progress of Pharmacy, A. Ph. A.

The report of the Research Committee was also read by Prof. Arny. It was explained that the committee could not name the recipient of the research grant at this time as definite action had not yet been taken on this matter.

It was moved and carried that the report be adopted and that the motion carry with it the adoption of the resolutions contained therein.

AMERICAN PHARMACEUTICAL ASSOCIATION COMMITTEE ON RESEARCH.

On August 12th in accordance with resolutions passed by this body at its 1921 meeting in New Orleans, there was held a Research Conference at which were present the following organizations: American Conference of Pharmaceutical Faculties, American Pharmaceutical Association U. S. P. Revision Committee, National Association of Retail Druggists, American Drug Manufacturers' Association, American Pharmaceutical Manufacturers' Association, U. S. Department of Agriculture.

At the morning session it was decided that the research workers of these several organizations be brought together in a research group and there was drawn up a constitution and by-laws appended to this report, the salient points of which are as follows:

Name—National Conference of Pharmaceutical Research.

Duties—To encourage, by all possible means, pharmaceutical research in its broadest sense.

Membership—One delegate and not more than three associates from each constituent organization; voting being limited to the delegates.

Officers—At present, chairman, vice-chairman and secretary-treasurer all of whom shall serve without remuneration.

Dues—$20.00 a year from each member organization.

Meetings—Annually, business in the interim between meetings being transacted by correspondence.

At the afternoon session there was a discussion of the work that could well be performed by the Research Conference and the following principles were adopted:

1. The primary function of this Conference shall be to serve as a Clearing House of American Pharmaceutical Research. In discharging its duties it shall only act in an advisory capacity leaving utmost freedom of action to the various research committees of the member organzations.

2. The Research Conference will also endeavor to augment present established research funds; to encourage the establishment of other research funds and annual grants for research.

3. The Research Conference shall collect information as to those research workers to whom grants should be awarded. While the present intention is that research funds and moneys for research grants shall be handled by the organizations or individuals making grants, it will come

well within the province of the Research Conference, when requested to do so, to suggest nominees for research grants.

4. The Research Conference shall encourage research in medicinal substances among:

(*a*) Retail pharmacists working in coöperation with the N. A. R. D. committee on U. S. P. and N. F.

(*b*) Teachers in pharmacy schools and their advanced students, working in cooperation with the research committees of the A. Ph. A. and of the Conference of Faculties.

(*c*) Investigators in manufacturing plants working in coöperation with the Scientific Sections of the A. Ph. A. and of the Drug Manufacturers' Association and with the Committee on Formula of the American Pharmaceutical Manufacturers' Association.

(*d*) Non-pharmaceutical teachers in colleges and their advanced students interested in the study of medicinal substances, working in coöperation with the Committee of Pharmaceutical Research of the National Research Council.

5. The Research Conference shall encourage preparation of a census of American pharmaceutical research and shall aid in the preparation of a list of pharmaceutical research problems that are now needing solution.

6. While the organization of the Research Conference was effected by the representatives of seven organizations, a tentative list including a number of other organizations has been drawn up and efforts will be made during the coming year to secure their coöperation.

In connection with Principle 3*b* the following resolutions were passed:

It is the sense of this Research Conference that every college of pharmacy should provide the necessary financial means so that at least one professor or, if that should not be possible, an assistant be appointed to devote his entire time to research. It is resolved that this resolution be sent to the trustees of the various colleges of pharmacy.

Conclusions.

The foregoing outline of the work done at the Conference of August 12th shows that not only has there been launched the project of a Research Conference as authorized by this organization at its 1921 meeting, but that already coöperative work has been planned that will keep every research committee of every organization busy and in coöperation with each other.

It is therefore urged upon this association by your delegates that we give an approval of the proposed Research Conference by the passage of the following resolutions:

Resolved, That this organization will take part in the National Conference of Pharmaceutical Research and will appoint one delegate and three associates as its representatives.

Resolved, That $20.00 be appropriated to cover the dues of the first year.

Respectfully submitted,

H. V. ARNY, *Chairman*.

NATIONAL CONFERENCE OF PHARMACEUTICAL RESEARCH.

Constitution.

1. *Name:* National Conference of Pharmaceutical Research.
2. *Duties:* To encourage, by all possible means, pharmaceutical research in its broadest sense.
3. *Membership:* The membership of this conference shall consist of one delegate who shall have the right to vote, and not more than three associates from each constituent organization.
4. *Voting:* Shall be limited to the properly accredited delegates to the Conference. (Where organizations shall have paid the annual dues.)
5. *Officers:* The officers of the Conference shall consist of Chairman, Vice-Chairman and Secretary-Treasurer, all of whom shall be elected annually. They shall hold office until the election of their successors.
6. *Dues:* For the purpose of meeting the nominal expenditures of the Conference, the annual dues of each constituent organization shall be $20.00.
7. *Amendments:* Proper notice of proposed amendments shall be submitted to all constituent organizations thirty days before the annual meeting, and, upon receiving a two-thirds vote of the delegates present at the annual meeting, shall become part of the constitution.

By-Laws.

1. The officers mentioned in Article 5 of the Constitution shall serve without remuneration and shall discharge the duties usually pertaining to such officers.
2. The officers of the Conference shall act as an Executive Committee thereof.
3. The annual meeting shall be called at such time and place as decided upon by the Executive Committee. The work of the Conference ad interim shall be conducted by correspondence.
4. These By-Laws can be amended by a majority vote of delegates present at the annual meeting.

REPORT OF COMMITTEE ON STANDARDS.

The report of the Committee on Standards was read by the Secretary as it was necessary for Chairman Murray to leave the city before the time of this meeting. It was moved and carried that the report be received and take the usual course.

CLEVELAND, August 15, 1922.

The Committee on Standards begs to report that it has brought no standards to completion this year. It has numerous standards prepared in tentative form.

None of the fund available for the Committee has been spent.

The Chairman would like to call attention to four vacancies occurring by expiration of terms this year. They are filled at the pleasure of the Council. The present incumbents are: E. E. Wyckoff, Brooklyn, N. Y.; J. A. Koch, Pittsburgh, Pa.; L. D. Havenhill, Lawrence, Kan.; E. L. Newcomb, Minneapolis, Minn.

It is the belief of your chairman that the work of this Committee will make more progress after the revisions of the Pharmacopoeia and National Formulary are completed, as over two-thirds of our membership are serving on those revisions. B. L. MURRAY, *Chairman.*

House resolution No. 258 (House of Representatives, U. S. A.) pertaining to an investigation of conditions in the United States relative to drug addiction, was read by the Secretary. It was moved by Prof. J. H. Beal, and carried, that the resolutions be approved with the amendment that all pharmacists now in Congress be included in the personnel of the proposed committee of investigation. It was understood that the "Whereases" were to be deleted and only the resolutions approved;* these follow:

Competent medical and administrative authorities estimate that between 1,000,000 and 2,000,000 persons in the United States are victims of narcotic drug addiction, many of them being innocent persons who have become addicted through the use of morphine and other opiates prescribed by physicians in the treatment of painful diseases—creating a situation which now endangers the physical and moral welfare of the citizens of our nation; and

We are assured by medical and administrative authorities that there are more narcotic drug addicts in the United States to-day than there were when the Harrison Narcotic Law was enacted seven years ago; and

It has been established that narcotic drug addiction constitutes a diseased condition, an official report of the United States Treasury Department, published in 1919, declaring that, "The constant use of narcotics, such as opium, its preparations and alkaloids, produces a condition in the body which is beginning to be looked upon by physicians as a disease. This diseased condition requires the repeated administration of the drug of addiction to keep the body functioning normally.... The mere withdrawal of the drug induces such fundamental disorganization and such painful disturbances that addicts are driven to any extreme to procure more of the drug with which to allay their suffering" and, further, "Anyone repeatedly taking a narcotic drug over a period of thirty days, in the case of a very susceptible individual for ten days, is in grave danger of becoming an addict" and, further, "And when addiction has been established, it is impossible for the individual to discontinue the use of the drug without outside assistance;" and

The same report declares that "In recent years, especially since the enactment of the Harrison law, the traffic (in narcotic drugs) by 'underground' channels has increased enormously, and at the present time it is believed to be equally as extensive as that carried on in a legitimate manner;" and

The administrators of the Harrison Narcotic Law apparently have ignored the findings

* Resolution No. 258 is printed in September JOUR. A. PH. A., p. 765 and 766; the Association approved action of Council as reported in Council Minutes.

of competent physicians and research workers and seem still to adhere to the "vicious habit" theory of opiate addiction, and, through the promulgation of regulations, have made it increasingly difficult for honest and reputable physicians to treat innocent addicts, thereby driving those addicts to illicit sources of supply and augmenting an "underground" traffic which has grown to enormous, and threatening, proportions—without depriving the criminal addict of his drug of addiction; and

It has been declared on the floor of Congress that the narcotic drug situation in the United States "has been complicated and aggravated by administration of existing narcotic laws in the various states and of the Harrison narcotic law by the Federal Government and many of the rulings of the Federal Government and the provisions of state narcotic laws and sanitary codes of municipalities of the United States, pointing to an organized conspiracy on the part of certain administrators and physicians to drive narcotic-drug addicts into established sanitaria purporting to treat and cure narcotic-drug addictions;" and

Reputable and honest physicians and pharmacists have been needlessly harassed by agents of narcotic law enforcement officials and have been intimidated and prevented from practicing their professions as a result of the issuance of regulations which we are not now certain were issued upon the advice of the best medical and administrative advice obtainable; and

It seems advisable, in view of the seriousness of the situation as regards narcotic drug addiction; the fact that the Harrison Narcotic Law, as administered, apparently has not checked the illicit distribution of narcotic drugs; the fact that the "disease" theory of narcotic drug addiction apparently is being ignored by the administrators of the Harrison Act; and the fact it has been charged that the law is being administered to serve private interests, that there should be a full, unbiased and fearless investigation of the entire narcotic drug situation in the United States; and

A resolution (House Resolution No. 258) calling for such an investigation has already been introduced in the House of Representatives; and

This resolution has been approved by The American Medical Association, The American Therapeutic Society, the state pharmaceutical associations of Alabama, California, Delaware, Kansas, New Hampshire, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Virginia, and Wisconsin and by many state and local medical societies.

Prof. E. F. Kelly presented the following request for additional appropriations: $250 for the Committee on Membership; $6439.70 for the Year Book; and $250 for the Headquarters Building Fund.

It was moved and carried that this request for additional funds be granted.

The Chairman appointed the following to serve as a committee to nominate members of Council committees: C. E. Caspari, *Chairman;* Hugo Schaefer; R. A. Lyman.

Prof. L. E. Sayre called the attention of the Council to the fact that it was losing the services of a very valuable member, namely, Prof. Arny. He further moved, and it was carried, that a committee be appointed by the Chairman to draft suitable resolutions expressing appreciation of his services. The following were appointed to serve on this committee: Prof. L. E. Sayre, *Chairman;* John G. Godding; W. F. Rudd.

The meeting adjourned at 9:15. A. G. DuMez, *Secretary.*

MINUTES OF THE SIXTH MEETING OF THE COUNCIL FOR 1921–1922.

The sixth meeting of the 1921–1922 Council was held at the Statler Hotel, Cleveland, Ohio, August 18, 1922.

The meeting was called to order at 4:15 P.M., Chairman LaWall presiding.

The following members were present: Messrs. Arny, Beal, Bibbins, Chase, Day, Diner, DuMez, Dye, Eberle, Frost, Godding, Hilton, Kelly, Koch, LaWall, Lyman, Rudd, Schaefer, Scoville, Snow, Spease, Stewart and Whelpley.

The minutes of the previous meeting were read and approved.

Applications Nos. 624–627 were presented for a vote. It was moved and carried that the Secretary be instructed to cast an affirmative ballot for these applicants. The ballot was so cast.

The following communication from the Women's Section was read:

"Council of American Pharmaceutical Association:

"By vote of the Women's Section at its meeting August 17, 1922, the By-Laws

of the Section were amended to change the name of the officers by substituting the word 'Chairman' for the word 'President,' making the roster uniform with that of other sections. The office of Treasurer is also eliminated.

ANNA G. BAGLEY, *Secretary.*"

It was moved and carried that the communication be received and that the change in the By-Laws of the Section be approved.

The following expression of appreciation of the services of Prof. H. V. Arny as Reporter on the Progress of Pharmacy was presented by the Committee appointed for that purpose and read by the Secretary:

Expression of Appreciation of the Services of H. V. Arny, Reporter on the Progress of Pharmacy.

"In accepting the resignation of our distinguished member and associate as Reporter of the Progress of Pharmacy and Editor of the Year Book, the Council of the A. Ph. A. wishes to express in most emphatic terms its high appreciation of the service he has rendered in this capacity.

"Dr. H. V. Arny has placed on a firm basis a publication which, in its initial stage, was considered a venture; after the decision of the Association that a monthly Journal should be published, this additional undertaking was thought, by many, to be hazardous. Since this time it has developed, through the earnest devotion and contributions of Dr. Arny, into a work of inestimable value to the Association and to Pharmacy of which the Council may well be proud. We can ill spare Dr. Arny and deeply regret losing him in this signal service.

(Signed) L. E. SAYRE,
W. F. RUDD.
J. G. GODDING."

It was moved and carried by a rising vote that the report be received, that it be spread on the minutes, published in the JOURNAL, and that a copy be presented to Prof. Arny.

The following supplemental report of the Research Committee was ready by Prof. Arny:

AMERICAN PHARMACEUTICAL ASSOCIATION COMMITTEE ON RESEARCH SUPPLEMENTARY REPORT.

Your Committee met on August 17th to study applications for grants from the A. Ph. A. Research Fund. There were present Messrs. Arny, Geo. D. Beal, Koch, Kremers, LaWall, Scoville, Whelpley, Youngken and Kelly. The following awards are unanimously recommended to the Council and the Association:

To Albert Schneider, Portland, Oregon—for research on sodium cinnamate and on *Chaparro amargosa*, $200.00.

To David I. Macht, Baltimore, Md.—for research on benzyl derivatives, $200.00.

At the meeting a committee was appointed to formulate application and report blanks to be used by those interested in the grants. It was also decided that the committee recommend to the Council that hereafter 200 reprints of each paper reporting work done under a grant be prepared at the expense of the Research Fund. Of these 200 reprints, 100 copies will be presented to the author and the other 100 will be kept by the Association in a safe place for possible use in the years to come.

It was also decided that the Committee recommend to the Council that the costs in connection with the editorial preparation of the papers presented before the Scientific Section this year by Dr. Macht, to whom the 1921 grant was made, be defrayed out of the money of the Research Fund.

Attention is called to the fact that the five-year terms of Julius A. Koch and of Edward Kremers expire at this, 1922, meeting and that the election of their successors is in order.

Respectfully submitted,
H. V. ARNY.

It was moved and carried that the report be received and the recommendations contained therein be approved.

It was then moved and carried that the thanks of the Council be extended to the retiring chairman, Prof. Charles H. LaWall, for his services.

The meeting adjourned at 4:45 P.M.

A. G. DUMEZ, *Secretary.*

MINUTES OF THE FIRST MEETING OF THE COUNCIL FOR 1922–1923.

The first, or reorganization, meeting of the Council for 1922–1923 was held at the Statler Hotel, Cleveland, Ohio, August 18, 1922.

The meeting was called to order at 4:50 P.M., Prof. C. H. LaWall acting as temporary chairman.

The following members were present: Messrs. Bibbins, Chase, Day, Diner, DuMez, Dye, Eberle, Eddy, Gidley, Godding, Hilton, Jones, Kelly, Koch, Lyman, Rudd, Schaefer, Scoville, Snow, Stewart, Viehoever, Wallace, Washburn and Whelpley.

The first order of business taken up was the election of officers.

E. G. Eberle nominated S. L. Hilton for chairman. It was moved and carried that the nominations be closed and that the Secretary cast an affirmative ballot for the nominee. The ballot was so cast.

W. B. Day nominated C. E. Caspari for Vice-Chairman. It was moved and carried that the nominations be closed and that the Secretary cast an affirmative ballot for the nominee. The ballot was so cast.

H. M. Whelpley nominated A. G. DuMez for Secretary. It was moved and carried that the nominations be closed and that the Chairman cast an affirmative ballot for the nominee. The ballot was so cast.

The minutes of the last meeting of the 1921–1922 Council were read and approved.

Nominations for officers of the Association were made as follows: *Honorary President:* Thomas D. McElhenie; *General Secretary:* Wm. B. Day; *Treasurer:* E. F. Kelly; *Editor of the* JOURNAL: E. G. Eberle.

In each case, it was moved and carried that the nominations be closed and that the Secretary be instructed to cast an affirmative ballot for the nominee. The respective ballots were so cast.

Reporter on the Progress of Pharmacy: A. G. DUMEZ.

Owing to the resignation of Prof. Arny, it was necessary to elect a new Reporter on the Progress of Pharmacy. A. G. DuMez was nominated by Prof. Wm. B. Day. It was then moved and carried that the nominations be closed and that the Chairman cast an affirmative ballot for the nominee. The ballot was so cast. The office was accepted by the elected on condition that assistance in preparing the abstracts be assured. This assurance was given by Prof. R. A. Lyman for the Executive Committee of the American Conference of Pharmaceutical Faculties and by Professors Day, Dye, Rudd, and others as individuals.

Local Secretary: JOHN G. BEARD.

On motion by Prof. E. F. Kelly, duly seconded and carried, E. V. Zoeller of Tarboro, North Carolina, was given the privilege of the floor. He spoke very highly of Professor Beard and assured the members present that no better selection could be made for the office of Local Secretary. Prof. Beard's name was then put in nomination, after which it was moved and carried that the nominations be closed and that the Secretary be instructed to cast an affirmative ballot for the nominee. The ballot was so cast.

It was further moved by Dr. Whelpley, and carried, that the Local Secretary be made Chairman of the Committee on Arrangements and that he be empowered to select his associates.

The report of the Committee on Nominations for members of the Council committees was then read. It was moved and carried that the report be received and that the Secretary be instructed to cast an affirmative ballot for the election of the nominees *en bloc.* The ballot was so cast. The committees are named in Council Letter No. 1.

It was moved by Prof. Day, and carried, that an appropriation of $25 for the Syllabus Committee be approved.

The Committee on Closer Affiliation of Pharmacists and Physicians recommended that the name of the Committee be changed to that of "Committee on Medical Relations."

Dr. Diner objected to the change on the grounds that the new title would be ambiguous. It was finally moved and carried that Dr. Fantus be requested to give the reasons which influenced the Committee to recommend this change and that the matter be submitted for a vote by mail, if necessary.

There being no further business, the meeting adjourned. Time 5:20 P.M.

A. G. DUMEZ, *Secretary.*

A. PH. A. COUNCIL LETTER NO. 1.*

WASHINGTON, D. C., September 18, 1922.

TO THE MEMBERS OF THE COUNCIL:

1. Organization of the Council for 1922–1923.

OFFICERS.

S. L. Hilton, *Chairman*	1033–22nd St., N. W., Washington, D. C.
Charles E. Caspari, *Vice-Chairman*	2108 Locust St., St. Louis, Mo
A. G. DuMez, *Secretary*	Hygienic Laboratory, Washington, D. C.

MEMBERS.

Beard, John G.	Chapel Hill, N. C.
Beringer, Geo. M.	501 Federal St., Camden, N. J.
Bibbins, Francis E.	4246 Cornelius Ave., Indianapolis, Ind.
Caspari, Charles E.	2108 Locust St., St. Louis, Mo.
Chase, Walter M.	Bulletin of Pharmacy, Detroit, Mich.
Day, Wm. B.	701 South Wood St., Chicago, Ill.
Diner, Jacob	344 W. 85th St., New York, N. Y.
DuMez, A. G.	Hygienic Laboratory, Washington, D. C.
Dye, Clair A.	Ohio State University, Columbus, Ohio.
Eberle, E. G.	253 Bourse Bldg., Philadelphia, Pa.
Eddy, Clyde L.	100 William St., New York, N. Y.
Fennel, C. T. P.	614 W. Court St., Cincinnati, Ohio.
Frost, W. A.	Selby & Western Avenue, St. Paul, Minn.
Fuller, H. C.	1845 B St., N. W., Washington, D. C.
Gathercoal, E. N.	701 S. Wood St., Chicago, Ill.
Gidley, W. F.	276 Littleton St., W. Lafayette, Ind.
Godding, John G.	278 Dartmouth St., Boston, Mass.
Hensel, Samuel T.	Hotel W. Court, 1415 Glenarm St., Denver, Col.
Hilton, Samuel L.	1033 22nd St., N. W., Washington, D. C.
Hopp, Lewis C.	1104 Euclid Ave., Cleveland, Ohio.
Jones, David F.[1]	106 Granite Block, Watertown, S. Dak.
Kebler, Lyman F.	1322 Park Road, Washington, D. C.
Kelly, E. F.	Lombard & Green Sts., Baltimore, Md.
Koch, J. A.	Bluff & Pride Sts., Pittsburgh, Pa.
LaPierre, E. H.	80 River St., Cambridge, Mass.
Lyman, R. A.	1649 S. 21st St., Lincoln, Nebr.
Mason, Harry B.	P. O. Box 484, Detroit, Mich.
McElhenie, Thos. D.	259 Ryerson St., Brooklyn, N. Y.
Mollett, C. E.	1321 Helen Avenue, Missoula, Mont.
Neal, Charles C.	303 W. Pratt St., Baltimore, Md.
Noble, J. Merner	500 N. Commercial St., St. Louis, Mo.
Roehr, Clarissa M.	University Hospital, San Francisco, Calif.
Rudd, Wortley F.	1716 Grove Avenue, Richmond, Va.
Sayre, L. E.	University of Kansas, Lawrence, Kans.
Schaefer, Hugo H.[1]	115 W. 68th Street, New York, N. Y.
Scoville, W. L.	P. O. Box 488, Detroit, Mich.
Snow, Clyde M.	701 South Wood Street, Chicago, Ill.
Stewart, Francis E.	11 W. Phil-Ellena St., Philadelphia, Pa.
Viehoever, Arno	Bureau of Chemistry, Washington, D. C.
Washburn, C. B.	206 Kitchner Ave., Detroit, Mich.
Whelpley, Henry M.	2342 Albion Place, St. Louis, Mo.
White, William R.	314 Hancock St., Nashville, Tenn.
Wimmer, Curt P.[1]	115 W. 68th Street, New York, N. Y.
Wulling, F. J.	University of Minnesota, Minneapolis, Minn.

* Council Letters following No. 2 will be printed in the usual form.

[1] See item 4, Council Letter No. 2.

COMMITTEES.

Executive Committee.

S. L. Hilton, *Chm.*, Washington, D. C.
A. G. DuMez, *Sec.*, Washington, D. C.
W. B. Day, Chicago, Ill.
Jacob Diner, New York, N. Y.
Clyde L. Eddy, New York, N. Y.
J. A. Koch, Pittsburgh, Pa.
W. F. Rudd, Richmond, Va.
E. F. Kelly, Baltimore, Md.

Committee on Finance.

J. A. Koch, *Chm.*, Pittsburgh, Pa.
Chas. E. Caspari, St. Louis, Mo.
Geo. M. Beringer, Camden, N. J.

Committee on Invested and Trust Funds.

Wm. B. Day, *Chm.*, Chicago, Ill.
E. G. Eberle, Philadelphia, Pa.
Frederick J. Wulling, Minneapolis, Minn.
E. F. Kelly, *ex-officio*, Baltimore, Md.

Committee on Centennial Fund.

S. L. Hilton, *Chm.*, Washington, D. C.
Wm. B. Day, Chicago, Ill.
J. A. Koch, Pittsburgh, Pa.

Committee on Publication.

A. G. DuMez, *Chm.*, Washington, D. C.
S. L. Hilton, Washington, D. C.
W. L. Scoville, Detroit, Mich.
Ivor Griffith, Philadelphia, Pa.
R. A. Lyman, Lincoln, Nebr.

Ex-officio members—The Editor of the JOURNAL, Reporter on the Progress of Pharmacy, General Secretary and Treasurer.

Committee on National Formulary.

W. L. Scoville, *Chm.*, Detroit, Mich.
Clyde M. Snow, Chicago, Ill.
Otto Raubenheimer, Brooklyn, N. Y.
Leonard A. Seltzer, Detroit, Mich.
H. V. Arny, New York, N. Y.
H. Engelhardt, Baltimore, Md.
E. L. Newcomb, Minneapolis, Minn.
E. Fullerton Cook, Philadelphia, Pa.
H. A. B. Dunning, Baltimore, Md.
S. L. Hilton, Washington, D. C.
Chas. H. LaWall, Philadelphia, Pa.
Geo. M. Beringer, Camden, N. J.
P. Henry Utech, Meadville, Pa.
Bernard Fantus, Chicago, Ill.
O. A. Farwell, Detroit, Mich.

American Pharmaceutical Research Committee.

Chas. H. LaWall, Philadelphia, Pa.	Term expires 1923
H. V. Arny, New York, N. Y. (*Chm.*)	Term expires 1923
George D. Beal, Urbana, Ill.	Term expires 1924
H. M. Whelpley, St. Louis, Mo.	Term expires 1924
F. R. Eldred, Indianapolis, Ind.	Term expires 1925
Wilbur L. Scoville, Detroit, Mich.	Term expires 1925
Henry Kraemer, Mt. Clemens, Mich.	Term expires 1926
Geo. M. Beringer, Camden, N. J.	Term expires 1926
J. A. Koch, Pittsburgh, Pa.	Term expires 1927
Edward Kremers, Madison, Wis.	Term expires 1927

Committee on Standards.

Elmer E. Wyckoff, Brooklyn, N. Y.	Term expires 1923
J. A. Koch, Pittsburgh, Pa.	Term expires 1923
L. D. Havenhill, Lawrence, Kans.	Term expires 1923
E. L. Newcomb, Minneapolis, Minn.	Term expires 1923
Henry Kraemer, Ann Arbor, Mich.	Term expires 1924
Eustace H. Gane, New York, N. Y.	Term expires 1924
B. L. Murray, *Chm.*, Rahway, N. J.	Term expires 1924
W. A. Puckner, Chicago, Ill.	Term expires 1924
John G. Roberts, Philadelphia, Pa.	Term expires 1925
Otto Raubenheimer, Brooklyn, N. Y.	Term expires 1925
Geo. D. Rosengarten, Philadelphia, Pa.	Term expires 1925
O. A. Farwell, Detroit, Mich.	Term expires 1925
Geo. M. Beringer, Camden, N. J.	Term expires 1926
H. H. Rusby, Newark, N. J.	Term expires 1926

F. R. Eldred, Indianapolis, Ind. ..... Term expires 1926
John M. Francis, Detroit, Mich. ..... Term expires 1926

Committee on Unofficial Formulas.

E. F. Cook, Philadelphia, Pa. ..... Term expires 1923
R. P. Fischelis, Philadelphia, Pa. ..... Term expires 1923
B. Fantus, Chicago, Ill. ..... Term expires 1923
Wm. Gray, Chicago, Ill. ..... Term expires 1923
L. D. Havenhill, Lawrence, Kans. ..... Term expires 1923
E. N. Gathercoal, Chicago, Ill. ..... Term expires 1924
I. Griffith, Philadelphia, Pa. ..... Term expires 1924
J. Hostmann, New York, N. Y. ..... Term expires 1924
J. L. Lascoff, *Chm.*, New York, N. Y. ..... Term expires 1924
P. H. Utech, Meadville, Pa. ..... Term expires 1924
G. M. Beringer, Camden, N. J. ..... Term expires 1925
S. L. Hilton, Washington, D. C. ..... Term expires 1925
F. W. Nitardy, Brooklyn, N. Y. ..... Term expires 1925
C. Osseward, Seattle, Wash. ..... Term expires 1925
O. Raubenheimer, Brooklyn, N. Y. ..... Term expires 1915
W. H. Glover, Lawrence, Mass. ..... Term expires 1926
F. B. Kilmer, New Brunswick, N. J. ..... Term expires 1926
W. L. Scoville, Detroit, Mich. ..... Term expires 1926
C. P. Wimmer, New York, N. Y. ..... Term expires 1926
R. B. Gerstner, New York, N. Y. ..... Term expires 1926
J. K. Thum, Philadelphia, Pa. ..... Term expires 1927
I. A. Becker, Chicago, Ill. ..... Term expires 1927
C. J. Clayton, Denver, Colo. ..... Term expires 1927
M. A. Davis, White Plains, N. Y. ..... Term expires 1927
C. M. Roehr, San Francisco, Calif. ..... Term expires 1927

Commission on Proprietary Medicines.

Charles E. Caspari, St. Louis, Mo. ..... Term expires 1923
S. C. Henry, Philadelphia, Pa. ..... Term expires 1924
J. H. Beal, *Chm.*, Urbana, Ill. ..... Term expires 1925
W. H. Cousins, Dallas, Texas. ..... Term expires 1926
John C. Wallace, New Castle, Pa. ..... Term expires 1927

Committee on Transportation.

H. H. Schaefer, *Chm.*, New York, N. Y.
Lewis C. Hopp, Cleveland, Ohio
H. M. Whelpley, St. Louis, Mo.
C. A. Mayo, Cincinnati, Ohio
E. F. Kelly, Baltimore, Md.
W. B. Day, Chicago, Ill.
J. L. Lengfeld, San Francisco, Cal.
E. Floyd Allen, Minneapolis, Minn.
F. C. Godbold, New Orleans, La.
S. S. Jacobs, Atlanta, Ga.
T. F. Bradley, Boston, Mass.
Chas. J. Clayton, Denver, Colo.

The General Secretary and Local Secretary, *ex-officio* members.

2. (*Motion No. 1.*) *Resignation of Prof. Edward Kremers as a member of the Committee on Research.* Under date of September 1, 1922, President Koch writes from Pittsburgh as follows:

> "I am just in receipt of a letter from Dr. Edward Kremers tendering his resignation as a member of the Committee on Research.
>
> Dr. Kremers has explained to me in detail his reasons for this action and much as I regret losing his services on this Committee, I will offer the motion that 'his resignation be accepted and a successor on the Committee elected.' "
>
> This motion is seconded by Chairman Hilton.

3. Call for nominations for member of the Committee on Publication. The attention of your Secretary has been called to the fact that Ivor Griffith is not a member of the new Council and is therefore not eligible for service on the Committee on Publication. Nominations to fill this vacancy are therefore being called for at this time.

A. G. DuMez, *Secretary.*

A. PH. A. COUNCIL LETTER NO. 2.

(Abstract in part.)

WASHINGTON, D. C., September 25, 1922.

TO THE MEMBERS OF THE COUNCIL:

4. Corrections for Council Letter No. 1. Please make the following corrections in Council Letter No. 1, so that you will have a correct list of Council members and their addresses for your files: (*a*) Delete the names of David F. Jones, Hugo H. Schaefer and Curt P. Wimmer. These men were members of the 1921–1922 Council by virtue of their offices as Second and Third Vice-Presidents and Chairman of the Historical Section. They have been succeeded in office by the present incumbents, Lyman F. Kebler and Clyde L. Eddy. (*b*) Correct the address of Lewis C. Hopp to read 10110 Euclid Ave., Cleveland, Ohio; that of Thomas D. McElhenie to read 266 Ryerson St., Brooklyn, N. Y.; that of W. F. Rudd to read 2416 Grove Ave., Richmond, Va.

5. Motion to accept the resignation of Prof. Edward Kremers as a member of the Committee on Research—result of vote. Motion No. 1, a motion to accept the resignation of Prof. Edward Kremers as a member of the Committee on Research, has received a majority of affirmative votes.

6. Nominations for member of Publication Committee (Item 3). The following names have been placed in nomination for member of the Committee on Publication to succeed Ivor Griffith: Walter M. Chase by Clyde L. Eddy; H. M. Whelpley by E. G. Eberle and Wm. B. Day; W. F. Rudd by Arno Viehoever; Clyde M. Eddy by W. L. Scoville.

If there are no objections raised, the nominations will be considered closed and a vote called for at this time. Please use the enclosed voting card.

7. Call for nominations for member of the Committee on Research. You are requested to forward nominations for a member of the Committee on Research to fill the vacancy caused by the resignation of Prof. Edward Kremers.

8. (Motion No. 2.) Request to donate a set of Proceedings and Year Books to the Pharmaceutical Institute of the University of Dorpat. With reference to this matter Prof. Edward Kremers writes from Madison, Wisconsin, as follows:

> "The Council of the A. Ph. A. has on several occasions acted favorably on my suggestion to send the Proceedings of our Association to European countries. This favorable action emboldens me to ask a like favor for one of the small Baltic States, *viz.*, Esthonia.
>
> The Pharmaceutical Institute of the University of Dorpat—the scene of lifelong activity of Dragendorff—has recently been reorganized with Professor J. Stamm as its Director. What the Czarist government had refused for years, the new republican state has granted, *viz.*, a certain amount of pharmaceutical home rule and the elevation of the practice of pharmacy to a higher educational standard. As I have learned, the Library of this Institute is sadly handicapped. The present rate of exchange precludes their buying American publications. I trust, therefore, that one of the largest and richest countries in the world will lend a hand, pharmaceutically speaking, to one of the smallest ones, struggling with poverty."

It is moved by W. B. Day, seconded by A. G. DuMez, that a set of Proceedings and Year Books be donated as requested.

9. (Motion No. 3.) Vote on applications for active membership in the A. Ph. A. You are requested to vote on the following applications for active membership in the Association:

No. 1, Henry Rudolf Henze, Univ. of Texas College of Pharmacy, Galveston, Texas; No. 2, Stanislaw Joseph Alkier, 390 Hancock St., Brooklyn, N. Y.; No. 3, Eugenio C. Quesada, College of Pharmacy, National University, Manila, P. I.; No. 4, Jose E. Jimenez, 835 San Fernando St., Manila, P. I.; No. 5, Patrocinio Valenzuela, Univ. of the Philippines, Manila, P. I.; No. 6, Rudolph Roldin Hartman, 25 N. Baldwin Ave., Sierra Madre, Calif.; No. 7, Audrey H. Ennis, Volga, S. Dak.; No. 8, Joseph Jay Mullin, 1341 Fulton St., Brooklyn, N. Y.; No. 9, John Francis Whitley, Jr., Gilliam, La.; No. 10, Charles Herbert Lucas, 132 N. Wayne St., Piqua, Ohio; No. 11, Clarence A. Nelsen, Front St., Colby, Wis.; No. 12, Milo A. Chehak, 210 Security Bldg., Cedar Rapids, Iowa; No. 13, Orville A. Matthews, Creston, Iowa; No. 14, Walter L. Rolfe, Flandreau, S. Dak.; No. 15, Otto Hanson, Park Falls, Wis.; No. 16, G. H. Flygt, Park Falls, Wis.

A. G. DUMEZ, *Secretary.*

HOUSE OF DELEGATES, AMERICAN PHARMACEUTICAL ASSOCIATION.

ABSTRACT OF THE MINUTES OF THE SESSIONS HELD IN THE HOTEL STATLER, CLEVELAND, AUGUST 15-18, 1922.

The First Session, held jointly with the First General Session, was called to order by Samuel L. Hilton of the Americal Pharmaceutical Association on Tuesday, August 15th, at 10:30 A.M. President Hilton called Chairman Kelly to the chair while he read his address. The President occupied the chair while Chairman Kelly read the following:

ADDRESS OF THE CHAIRMAN, HOUSE OF DELEGATES.

On behalf of the House of Delegates it becomes my happy duty to express appreciation for the further recognition, by the American Pharmaceutical Association, of that division of the Association, in giving it such an important part in the program of this opening session. This generous action on the part of the Association is, I can assure you, an incentive to the House and to the delegates from the state associations represented therein to take a greater interest in the parent association and to serve it more effectively. To bring the state associations into more intimate contact with it and to correlate, so far as is helpful to all concerned, their work with its endeavors for the benefit of pharmacy, has long been recognized as one of the most important duties of the A. Ph. A. and one which, if successfully carried out, will add more to its prestige, strength and possibility of service in the future than any other accomplishment. The program of this meeting is conclusive evidence, if it were at all necessary, that the place for and the need of the House of Delegates as one of the organic divisions in the organization of the A. Ph. A. is no longer a matter of question, and the House in turn should be by it stimulated to justify this action by enthusiastic support of the A. Ph. A. as the representative pharmaceutical organization of America.

To bring about the complete accord between the A. Ph. A. and the state associations which was originally intended and which must eventually exist if the best interests of the public and of pharmacy are to be served, it is only necessary, it seems to me, for the A. Ph. A. to decide to provide that place in its organization and work which the state associations deserve from every consideration of right, and particularly as its offspring, and then to show them that this arrangement is permanent, is made in good faith and with no ulterior motive with respect to them or any other organization. The attitude of the A. Ph. A. as represented in some of its past actions with respect to the House of Delegates has not been such, I may venture to say without offense I hope, as to cause the state associations to take that interest in the work of the House which is essential to its success. Certainly the steps taken at the last annual meeting and in this meeting should correct any such impression, and, as I have said before, should convince the delegates of the state associations that the division of the association in which they are most interested is now fully recognized. It is now to be hoped that in connection with the proposed reorganization of the A. Ph. A., or independently of it, steps will be taken to give the House of Delegates such definite duties and responsibilities as are in keeping with the organizations which are asked to send their delegates to its meetings, and as will offer these delegates opportunity to take an appropriate part in the work of the association. In the chairman's address of last year I expressed the belief that but little constructive work could be expected of the House under its present organization, limitation, and relation to the A. Ph. A. The relation has now been happily adjusted, and if the limitations can be removed and its organization perfected, much helpful work can be expected of the House of Delegates.

It will be recalled that at the last annual meeting, and pending the consideration of reorganization, the A. Ph. A. authorized the House of Delegates, through its Recording Secretary, to establish as rapidly as possible a closer relation with the state associations through a service plan which he suggested, and the Secretary will give a detailed report of this work in his address. It is most unfortunate that the serious and continued illness of the Secretary, on whom most of the work naturally devolved, interfered with and delayed his efforts at the most important period. In addition the publication by the Executive Committee of the Council of the proposed plan of reorganization of the A. Ph. A. very naturally caused some confusion in the state associations as to the relation between this service plan and complete reorganization. However, the results under these circumstances are, it seems to me, encouraging and should reorganization not be undertaken, this service plan should be pressed to what I believe can be made a successful conclusion. It is apparent to all, I hope, that something must be done, either along this line or through reorgani-

zation, to enlist the complete interest and support of the state associations in the work of the House of Delegates. Outside of such work as may be delegated to it by the parent body, there remains for the House of Delegates only the consideration of the service plan already referred to and the proposed plan of reorganization of the A. Ph. A. as submitted by the Executive Committee of the Council. Until a decision is reached by the A. Ph. A. as to whether or not reorganization is to be undertaken, and if so, how far-reaching it is to be and along what lines, nothing can be submitted to the state associations or to their representatives in the House of Delegates for any final action, and doubtless the delegates from the state associations are not empowered to commit their associations to any decision without ratification. But with these conditions fully understood, I believe that the delegates present should give careful consideration to the question of reorganization, because it vitally affects the future of the House, and affects to even a greater extent the interests of their principals—the state associations. In addition, the delegates can without doubt give some helpful advice and suggestions on this most important question, and can also forecast, to some extent at least, the likely reaction to be expected from the state associations, all of which, I am confident, will be welcomed by the parent body. It is almost unnecessary, I feel confident, to impress upon the members of the House of Delegates further than has been done the great import of the question of reorganization to them as members of the House and to the state associations, and I can only urge that this question be considered, without personal feeling, on the high plane which it deserves and with the realization that we are dealing with a basic question,—one which should not be unduly deferred nor hastily decided. I hope it will not be considered amiss if at this time I appeal to the officers and general membership of the A. Ph. A. to carefully weigh the interests of the House of Delegates and of the state associations in reaching a decision on this matter of reorganization. In the chairman's address of last year my personal conclusions as to reorganization were as clearly set out as possible, and although experience and the influence of others almost always modify our views, I confess to still holding these opinions in the main. It may be that in that statement and in this I seem to take the part of the state associations too strongly, and if this is the case, I want to say that it is because of my sincere belief in them as the backbone of American pharmacy now and in the future, and because I have been honored for two years as the presiding officer of that division of our association which most directly represents them. Whatever else may be said, it can hardly be denied that the membership of the state associations represents a fair average of American pharmacists of all branches; that this membership, whether confederated or not, is the basis with which we must deal in advancing the interests of American pharmacy; and that whether or not their ideals were furnished by others, the practical translation of these ideals into working laws and regulations in the United States has been by the membership of the state associations. It will be most unfortunate, in my opinion, if the A. Ph. A. does not secure and hold, by whatever is the best means, their primary allegiance and support, and it would be the most welcome outcome if the A. Ph. A. and the strongest divisional organizations could affiliate and then federate the state associations with that consolidation.

After General Secretary Day had rendered his annual report, Recording Secretary Hostmann of the House of Delegates read:

REPORT OF THE RECORDING SECRETARY.

To the Chairman and Members of the House of Delegates of the American Pharmaceutical Association:

The Committee on Resolutions at the second session of the tenth annual meeting of the House of Delegates, held in New Orleans September 8, 1921, recommended that the Council be requested to extend to the House of Delegates a sum not to exceed $500, for the purpose of properly presenting the plan to bring about a closer affiliation between the American Pharmaceutical Association and the various state associations as outlined in the report of the Recording Secretary read at the first session of the meeting.

The Council appropriated the above sum, and under date of September 23, I engaged an assistant, part of whose time has been devoted to the activities of the House. During October and November proper data was collected, and the plan of publicity was mapped out.

At the second session a special committee was appointed to suggest plans for such publicity. This committee met immediately after the adjournment of the second session and decided to recommend that the Secretary correspond with the officers and delegates and members of Executive Committees of the various state associations, as well as with such individuals in the various states as were interested in bringing about the much desired coöperation.

I immediately began corresponding with members of the American Pharmaceutical Association, state associations, boards of pharmacy throughout the United States. Under date of November 22 there was mailed to the officers, delegates and members of the Executive Committees of practically every state association the following mimeographed letter:

"Enclosed you will find reprints of an editorial. You are a member of the House of Delegates and therefore must be willing to assist in the reorganization of the House of Delegates so that it will be in a position to federate all of the state associations into the much desired cohesive and united body.

"A copy of this editorial is being sent to the president and secretary of your state association. Very shortly the reprint of the minutes of the House of Delegates will be mailed to you, as well as to the above-named officers. If any results are to be obtained by the suggested reorganization, it will be absolutely necessary to have the active coöperation of the state associations.

"I am therefore asking you to take up this matter with your officers, the members of your Executive Committee, and as many individuals as possible. I am enclosing a few application blanks for membership in the American Pharmaceutical Association, and will express the fond hope that you will return them to me properly filled out in the very near future.

"Thanking you for your coöperation, I am

Truly yours,

(Signed) JEANNOT HOSTMANN, *Secretary.*"

Enclosed with the letter was the following reprint of an editorial from JOUR. A. PH. A., Vol. 10, No. 10, p. 729. Under date of January 12 the reprint of the minutes of the tenth annual meeting (JOUR. A. PH. A., Vol. 10, No. 10, p. 786) was mailed with the following mimeographed letter of transmittal, to the individuals mentioned above.

Dear Mr. Secretary:

Enclosed you will find reprint of minutes of the sessions of the House of Delegates. These are deserving of your careful study. On page 789 you will find enumerated some of the activities proposed for the reorganized House of Delegates.

The American Pharmaceutical Association at the New Orleans meeting appropriated $500 which is now being expended in the preliminary work of the reorganization of the House. The officers of the House believe that the time for requesting the active support of the state associations has arrived.

Is your association ready to aid in inaugurating the "Service Plan" outlined in the minutes by making the first annual subscription of $100? When you take this matter up with your fellow officers and the Executive Committee, kindly remember that no money subscribed by state associations will be used in the reorganization work. Any and all sums received from state associations will be kept by the Treasurer as a separate fund until a sufficient amount to inaugurate the "Service Plan" has been received.

Keep in mind that this is not so much a plan to enlarge the American Pharmaceutical Association as it is to bring the state associations into their own by welding them into a large and powerful unit that will be the one organization that can speak for AMERICAN PHARMACY as a whole, and that when it speaks will be in a position that it *must* and *will* be listened to.

Copies of this letter are being sent to your fellow officers as well as to the delegates of your association.

Truly yours,

(Signed) JEANNOT HOSTMANN, *Secretary.*

P. S. Make checks payable to E. F. Kelly, Treasurer, A. PH. A.

Enc. J. H.

Both of these letters were signed by me. Hearing some criticism on using the mimeographed or circular letters I stopped using this method, and the correspondence from my office from that time on was in the form of personal letters.

The enclosure of membership application blanks also caused some criticism. Several officers of various state associations seemed to think that it made it appear as if the suggested plan

was simply a "scheme" to enlarge the membership of the American Pharmaceutical Association. Although I believe this result not only very desirable but very necessary for the success of the plan, I thought it best to prevent any misunderstanding by enclosing application blanks only when they were requested.

As the dates for the annual meeting of state associations approached I endeavored whenever possible to call the attention of the various officers of various state associations to the importance of the welfare of American Pharmacy, and the suggested plan of affiliation, asking that it be given a prominent part upon the program of the meeting, and that care be taken to select properly instructed delegates for the eleventh annual meeting to be held in Cleveland.

The Executive Committee of the Council was directed at the sixty-ninth annual meeting to present a plan of reorganization of the American Pharmaceutical Association at the Cleveland meeting. For this purpose it met in Washington, February 25th. The plan adopted at that meeting was published in the JOURNAL of the Association, and generally by the pharmaceutical press. I believe that this action was the cause of confusing the two issues to many members of state associations. Some state associations did not discuss either plan, some discussed the affiliation plan, and some discussed both; and again I wish to repeat that undoubtedly the fact that both plans were before the members of the state associations at the same time was the cause of quite some confusion.

Up to the present time I have received official notification from the following secretaries that their state associations were ready to affiliate: Maryland, North Dakota, Iowa, Minnesota, New Jersey, Virginia, Alabama and Kentucky.

The secretary of one state association writes that unfortunately their program was upset, and no time was left to discuss the plan. I understand, however, that it was decided to send delegates to this meeting and pay their expenses and they to report back upon the matter, at the next annual meeting. In another state the president of the association becoming interested in the plan made a very exhaustive study of reorganization with the result that a special committee was appointed, to report at the next annual meeting the discussions and actions taken at the meeting. Another secretary writes that he thinks that the members of his association are still indifferent to as important a matter as this one, and recommends that we make another trial next year. Another association after discussing the matter decided that first of all the plan was simply a duplication of the work being done by the National Association of Retail Druggists, and that the amount of money was too small to bring the desired results. The Ohio State Pharmaceutical Association decided not to affiliate at the present time. A special committee was appointed to study a modification of the suggested plan, and to have this modification presented to the House at this meeting.

I do not know whether the members of the House of Delegates will consider the affiliation of eight state associations as being sufficient to warrant any further endeavors to bring about the suggested coöperation. Personally I believe that this is absolutely necessary to have such a body, and that every effort possible should be made to bring it to a successful completion. If the plan of reorganization presented by the Executive Committee of the Council or a modification thereof is adopted at the seventieth annual meeting of the American Pharmaceutical Association, it will at best take several years to bring about such a reorganization. In the meantime, it is absolutely necessary that the thirty or more thousand members of the pharmaceutical industry who are members of state associations should have one central body that could speak and act for them. I most earnestly and sincerely request the members of this House of Delegates to give most earnest consideration to the question of whether it is not worth while the time, effort and money to continue this work. If the members of this House of Delegates decide to recommend that the publicity work be continued I would respectfully suggest that my successor be given sufficient financial aid to properly carry on the work.

The cost of the Secretary's activities during the past year has been as follows: Clerical assistance $345.00, mimeograph supplies $4.50, telegrams $11.56, postage $8.70, printing $15.50.

In closing I beg to say that it is my humble opinion, based upon a study of the needs and possibilities of a well-organized House of Delegates, covering a period of ten years, during seven of which I have been secretary of the House, as well as observations made at the meetings of various state associations that I have attended, and also from the careful study of the corre-

spondence I have had with the various and many members of many state associations, that such a plan of coöperation is absolutely necessary and absolutely feasible.

It is furthermore my opinion that the American Pharmaceutical Association should do everything within its power to bring about the suggested plan of affiliation, absolutely and entirely irrespective of what action is taken upon the plan of reorganization presented by the Executive Committee.

Respectfully submitted,
(Signed) JEANNOT HOSTMANN,
Secretary House of Delegates.

SECOND SESSION.

The Second Session of the House of Delegates was called to order by Chairman E. F. Kelly on Tuesday August 15th, at 4 P.M. State pharmaceutical associations were represented as follows: Lawrence C. Lewis, Sam A. Williams, Alabama; Charles F. Poe, Charles J. Clayton, Colorado; Ernest Berger, Florida; C. E. Gregory, Indiana; George Judisch, Iowa; H. Lionel Meredith, E. F. Kelly, Maryland; J. H. Webster, Michigan; E. L. Newcomb, Minnesota; E. V. Zoeller, North Carolina; Henry L. Haussamen, William F. Sudro, William P. Porterfield, North Dakota; Jeannot Hostmann, New Jersey; Henry B. Smith, Robert S. Lehman, New York; Ambrose Hunsberger, Pennsylvania; Washington H. Zeigler, South Carolina; David F. Dexter, South Dakota; John H. Culley, Utah; W. F. Rudd, Arthur L. I. Winne, Virginia. There were also in attendance 18 non-voting delegates. The total attendance was 41, representing 17 state associations and 12 non-voting associations.

The chair called the reception of delegates from departments of United States Government. There was no response. Chairman Kelly then appointed the following as a Committee on Resolutions: Messrs. Beal, Zoeller, Rudd, Hunsberger and Meredith. He also appointed Messrs. Crockett, Lehman and Noll as a Committee on Nominations.

Seven resolutions were presented, read, discussed and referred to the Committee on Resolutions. Chairman Kelly and Secretary Hostmann called attention to the fact that although the Constitution and By-Laws provide for the reference of resolutions to the House of Delegates, this procedure was not being followed, and that action was being taken upon resolutions by the General Sessions, as well as the Section Sessions without reference of such resolutions to the House. Upon motion the Secretary was directed to call the attention of the general officers to this improper procedure.

The resolutions pertaining to narcotics and alcohol brought forth a very lengthy, detailed and spirited discussion which was participated in by Messrs. Smith, Hostmann, Lehman, Diner, Antonow, Wetterstroem, Webster, and Finneran.

Dr. Jacob Diner addressed the House as the delegate from the American Therapeutic Society, suggesting among other things that the American Pharmaceutical Association send delegates to the annual meeting of the American Therapeutic Society.

After thanking Dr. Diner, Chairman Kelly declared the meeting adjourned at five o'clock.

THIRD SESSION.

The Third Session of the House of Delegates convened on Friday, August 18th at 10:30 A.M., Chairman Kelly presiding. There were in attendance Messrs. Duncan, Kelly, Hostmann, Koch, Eddy, Beal, Wetterstroem, Crockett, Snow, Zoeller, Beard, Rudd, Lehman, Winne, Judisch, Hunsberger, Hilton, Clayton, Diner, Day, Kantrowitz, Anderson, Höckert, Selzer, Finneran, Terry, Christensen, Smith, Spease, Chase, Canis, Meissner, Berger, Godding and Holton. Recording Secretary Jeannot Hostmann read in abstract the minutes of the Second Session, and they were ordered approved.

Chairman Beal now read the report of the Committee on Resolutions. Upon motion it was ordered received and the following resolutions were adopted after having been read and discussed seriatim.

THE BETTER CORRELATION OF PHARMACEUTICAL ORGANIZATIONS.

The House of Delegates approves the general tenor of the "Report on the Better Correlation of Pharmaceutical Organizations" referred to it by the Ohio State Pharmaceutical Association, as follows:

1. That local county and city pharmaceutical organizations should as far as practicable be directly affiliated with the state pharmaceutical associations of their respective states.

2. That all state pharmaceutical associations should be affiliated with and should regularly be represented by delegates at the annual conventions of the A. Ph. A. and N. A. R. D.

3. That at the annual meetings of the state associations at least one session should be devoted to the consideration of A. Ph. A. affairs and related topics, and at least one session to the consideration of the affairs of the N. A. R. D. and to matters connected with the workings of the latter association.

JOINT MEETINGS OF A. PH. A. AND N. A. R. D. EXECUTIVE COMMITTEES.

In order to better correlate the activities and promote the harmonious coöperation of the two societies, it is recommended that the Executive Committees of the American Pharmaceutical Association and the National Association of Retail Druggists hold an annual conference with each other, meeting alternately at the annual conventions, that is, the Executive Committees shall one year meet with the A. Ph. A. and the next year with the N. A. R. D.

STEPHENS-KELLY BILL.

Resolved, that this Association reaffirms its approval of the Stephens-Kelly Bill (H. R. 11) now pending in Congress, provided and with the understanding that it shall be passed in such form as will prevent unjust discrimination between retail dealers, and provided also that it shall not permit the creation of monopolies prejudicial to public interest.

ANNUAL PROGRAM.

Resolved, that it is the sense of the House of Delegates that meetings of the several sections of the Association should not be held simultaneously with the General Sessions of the Association or simultaneously with the Sessions of the House of Delegates, and that instructions to this effect be given by the Council to those who are charged with the preparation of the program for the Convention in 1923.

THE DISPENSING OF MEDICINAL LIQUORS.

The use of pure grain alcohol in the manufacture and compounding of drugs, medicines and chemicals is in a different category from the use of whiskey, brandy, etc., when prescribed by physicians for medicinal purposes, without further medication.

In the opinion of the Association the misuse of liquors of the latter class can be largely controlled by the exercise of proper care in the granting of permits by The Prohibition Unit at Washington. This Association endorses the recommendation adopted by the Executive Committee of our sister association, The National Association of Retail Druggists, that permits to dispense these liquors should not be granted to pharmacies that have not been in existence for a period of at least one year, and that such permits should be refused to all pharmacists who have been clearly proved to have dispensed such liquors for other than strictly medicinal purposes.

ALCOHOL FOR PHARMACEUTICAL PURPOSES.

Resolved, that many of the regulations for the enforcement of the Federal Prohibition Act are unduly complex and cumbersome and impose unnecessarily burdensome restrictions upon the professions of medicines and pharmacy, and upon the chemical and industrial arts, without placing any effective check upon illicit distilling, boot-legging, or the smuggling into the United States of large quantities of intoxicating liquors for beverage purposes.

Pure grain alcohol is as indispensable to the manufacture, purification and preservation of drugs, medicines and of many chemicals as are iron ore and coke to the manufacture of iron and steel.

Under existing conditions it is sometimes very difficult to procure sufficient pure grain alcohol for the most necessary of pharmaceutical and chemical operations, while those who dispense intoxicating liquors illegitimately apparently experience no serious difficulty in renewing their supply as frequently as needed.

SENATOR SMOOT'S CHARGES.

WHEREAS the Honorable Reed Smoot, United States Senator from Utah, has publicly stated on the floor of the Senate Chamber that the prices charged by druggists for prescriptions are exorbitant, thereby creating the impression in the public mind that retail druggists are profiteers, and

WHEREAS Bulletin No. 22 of the Harvard Bureau of Business Accounting set forth accurate statistics collected independently by the Bureau regarding the

costs of conducting the retail drug business and of the profits made therein, which are based upon a careful study of the accounts of one hundred and eighty-seven drug stores in over thirty different states, and

WHEREAS these statistics show that the average net profit made by retail druggists amounts to only 6.3 percent per annum, therefore, be it

Resolved, by the American Pharmaceutical Association in annual session assembled at Cleveland, Ohio, on August 18, 1922, that the President appoint a committee to lay these statistics and other arguments and facts before Senator Smoot, and that he be requested to make a retraction of his charges in a manner as public as that in which he made the original charges.

Under miscellaneous business Mr. Wetterstroem requested that some action be taken in reference to the abnormal withdrawal of alcohol by manufacturers of Essence of Ginger and flavoring extracts. Dr. Beal, while favoring the plan, called attention to the fact that it called for more rulings and suggested that it could be taken care of by proper prosecutions. Upon motion it was decided that the Association protest against the abnormal use of alcohol for the above purposes.

Chairman Crockett now presented the report of the Committee on Nominations, after announcing that Recording Secretary Hostmann had positively declined to be a candidate for reëlection. He read the names of the following candidates: *Chairman*, E. F. Kelly, Lombard and Greene Streets, Baltimore, Md.; *First Vice-Chairman*, E. L. Newcomb, Central Bank Building, Saint Paul, Minn.; *Second Vice-Chairman*, W. Bruce Philip, 201 Balboa Building, San Francisco, Calif.; *Recording Secretary*, William B. Day, 701 South Wood St., Chicago, Ill. Upon motion duly made, seconded and carried the Secretary cast a unanimous ballot, and Chairman Kelly declared them elected officers for the coming year.

Upon motion by Mr. Hunsberger a rising vote of thanks was extended to retiring Secretary Hostmann for his efficient service during the past seven years.

Chairman Kelly declared the meeting adjourned at twelve o'clock noon after making the following remarks:

"It is the wish of the incoming officers that they shall be considered as installed, in order to save time, if that is satisfactory to the House of Delegates. I want to say that if the report of the Committee on Nominations expresses the wish of all those most interested in the affairs of the House, the incoming officers undertake the completion of this work willingly and just as the Association desires. I want to ask the delegates to go back with the idea that we have initiated this work only, that it is not a completed job, and that it should be their individual interest and work. I believe that the plan adopted is simple in its operation. We want to get started at once, and if you go back with the idea that you can render better service in your own state through this House of Delegates, we will get somewhere in a hurry. Consequently, I hope that you will not feel that your duties terminate with this meeting, because you have helped us here.

Furthermore, if you will bring to the attention of the officers of this body any way in which the House can be of service, it will be appreciated."

(Signed) JEANNOT HOSTMANN, *Recording Secretary.*

H. V. ARNY—RETIRING REPORTER ON THE PROGRESS OF PHARMACY, A. PH. A.

A sketch of the retiring Reporter on the Progress of Pharmacy, H. V. Arny, will be found on p. 341 of Vol. V, JOUR. A. PH. A., and a brief running sketch on p. 490 of the June number of this year. The reports made by Dr. Arny at the Cleveland meeting, several of them printed in this issue of the JOURNAL, under Council Business, indicate his activities, and the esteem in which he is held was evidenced at the New York A. Ph. A. Branch meeting, May 15, 1922,* when he was awarded the Remington Honor Medal, and more recently by the expressions of the membership in Cleveland.

JEANNOT HOSTMANN—RETIRING RECORDING SECRETARY OF THE HOUSE OF DELEGATES, A. PH. A.

For a number of years representing more than the tenure of his office the retiring Recording Secretary, Jeannot Hostmann, persistently worked for the development of the House of Delegates,

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* June 1922 JOUR. A. PH. A., p. 441–446.

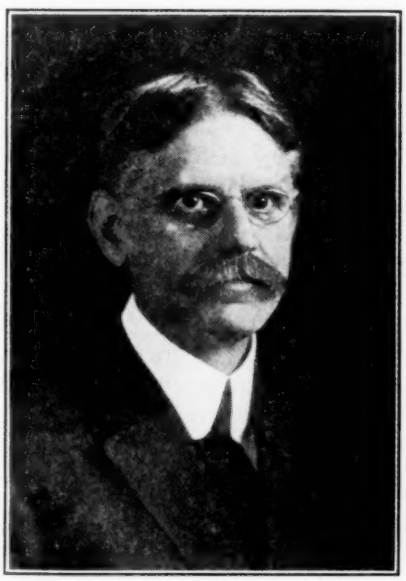
A. Ph. A., for which a reorganization plan has now been outlined and adopted by the Association whereby the activities of the Association will be readjusted for better and greater service of American pharmacy. The earlier history of the House of Delegates of the American Pharmaceutical Association has been directed by comparatively few, and the retiring Secretary has contributed largely thereto since 1915, when he was elected to the office of Recording Secretary. Appreciation of the services rendered by him found expression at the last session of the House of Delegates at the Cleveland meeting when it became known he had declined renomination. While Professor Hostmann's health is very much improved since his recent illness, it is assumed that relinquishment of some duties would materially aid in complete restoration, and such thought probably persuaded him to request that he be not renominated.

Records expressive of appreciation precede these comments; those of his activities in the House of Delegates are part of its history since 1915. A few biographical data follow:

Jeannot Hostmann was born in Jersey City December 27, 1876; he graduated from the College of Pharmacy of the City of New York in 1896; he left the retail drug business in 1907 in order to take up postgraduate studies; 1908–1910 he engaged in industrial and public work, and since then he has been connected with his Alma Mater, now occupying the Chair of Associate Professor of Chemistry and is Director of the Chemical Laboratory. He is President of the Alumni Association and Editor of the *Alumni Journal*.

Jeannot Hostmann affirms his belief in associations by active participation as well as affiliation—he was secretary of the organization meeting of the American Metric Association; since 1916 he has been secretary of the New Jersey Pharmaceutical Association; was for a number of years secretary of the New York Branch A. Ph. A.; he holds membership in the New York State Pharmaceutical Association and is an honorary member of the Maryland Association. He holds honorary and active membership in a number of chemical and pharmaceutical associations, and Mrs. Hostmann usually accompanies him to the annual conventions.

Professor Hostmann is chemist to the Board of Pharmacy of the State of New Jersey and to the Hoboken Board of Health. He is co-author of Sadtler and Coblentz's "Medical and Pharmaceutical Chemistry," and of Hostmann and McAdams' "Laboratory Manual of Analytical Chemistry." This is the decennium of his membership in the American Pharmaceutical Association.



H. V. ARNY.

JEANNOT HOSTMANN.

COMMITTEE REPORTS

REPORT OF COMMITTEE ON PHYSIOLOGIC ASSAYING, AMERICAN PHARMACEUTICAL ASSOCIATION, 1922.*

BY PAUL S. PITTENGER, CHAIRMAN.

In order to determine which of the various biologic methods of testing digitalis was being employed by the various workers throughout the country, your chairman last year addressed to practically all of the experts throughout the country, the following questionnaire on digitalis.

Last Year's Biological Assay Questionnaire.

1. What biologic method do you use in standardizing the Digitalis Series?
2. Give detailed outline of technique employed.
3. What do you consider the principal advantages of the method which you use as compared with other commonly used methods?
4. What method do you prefer?
5. Would you consider it a practical plan not to make any method of assay official, but simply to state the U. S. P. standard in terms of the most commonly used methods and thus permit the use of any recognized method as a means of standardization.
6. In case this scheme is favored it would be necessary to coördinate the different methods of technique so that whatever one is followed, the standard by that method would be equivalent to the standard by any other one.

ASSAY METHODS EMPLOYED BY DIFFERENT WORKERS.

The replies received showed that of the various biologic methods employed for testing digitalis preparations, 16 workers employed the "One-Hour Frog Heart Method," 5 the "M. L. D. Guinea Pig Method," 2 the "M. L. D. Frog Method," and 2 the "Hatcher Cat Method."

The number of workers using a method, however, is not necessarily an index to its relative accuracy. It was thought advisable, therefore, that this year our committee do some coöperative laboratory work in order to see if results could be obtained showing the comparative accuracy of the various methods employed.

In coöperative tests which have been made by our committee heretofore, each worker was asked to assay the samples submitted by several different methods. A large variation was usually found in the results obtained.

We are of the opinion that a great deal of this variation has been due to the fact that the individual worker was asked to carry out tests, using methods not employed in his routine work.

TESTS BY REGULAR METHOD OF EACH WORKER.

It is natural that each worker obtains the best results with the method with which he is most familiar and uses daily in his laboratory.

In order to obtain additional information as to the relative accuracy of the proposed methods, the chairman accordingly sent a set of 3 samples of Tincture Digitalis to each member of this Committee, to the members of the "Sub-committee on Digitalis" of the American Drug Manufacturers' Association, and to a number of other workers interested in physiologic assaying.

Each was requested to assay the samples according *to the method or methods with which he is most familiar and uses in his routine work.* The results obtained follow:

Sample no.	Actual strength.	"M. L. D. Guinea Pig" (Quici).	"M. L. D. Guinea Pig" (Harvey).	"M. L. D. Guinea Pig" (Butts).	"One-Hr. Frog Heart" (Rowe).	"One-Hr. Frog Heart" (Hunt).	"One-Hr. Frog Heart" (Walters).	"M. L. D. Frog" (Rowe).
1	100	100	100	100	100	100	100	100
2	80	77.2	85	75	67	50	96.4	89
3	60	65.5	75	55	57	45–55	81.8	64

Sample no.	Actual strength.	"Cat" (Hatcher).	"Cat" (Rowe).	"Cat" (modified) (Newcomb).	? (Fiske).
1	100	100	100	100	100
2	80	72.9	93	74.9	93
3	60	84.2–92.6	76	54.3	70

* Received at Cleveland meeting, A. Ph. A., 1922.

You will note from the table that differences between results obtained and the actual strength of the samples are as follows:

Method employed.	Sample No. 2.	Sample No. 3.
M. L. D. guinea pig method.....	2.8 to 5.0%	5.0 to 5.5%
M. L. D. frog method.....	9.0%	4.0%
One-hr. frog method.....	13.0 to 30.0%	3.0 to 21.8%
Cat method.....	5.1 to 13.0%	5.7 to 32.6%

The relative strength of the 3 samples was to be determined by comparing samples No. 2 and No. 3 with sample No. 1 which was called 100%.

Samples No. 2 and No. 3 were dilutions of No. 1 prepared so that No. 2 was 80 percent of the strength of No. 1, and No. 3 was 60 percent of the strength of No. 1. Each set of samples, however, was simply labeled No. 1, 2 and 3, the members of the committee having no knowledge of their relative activity.

RELATIVE MERITS OF THE DIFFERENT METHODS.

The above results would indicate, therefore, that the "M. L. D. Guinea Pig Method" and the "M. L. D. Frog Method" are about equally accurate, that both are more accurate than either the "One-Hour Frog Heart Method" or the "Cat Method," and that the "One-Hour Frog Heart Method" is more accurate than the "Cat Method."

In addition to giving data as to the relative accuracy of the various methods, the above experiments bring out another important point, *i. e.*, that the greatest variation between the results obtained and the actual strength of the preparation was only 32.6 percent.

When we consider the fact that tinctures of digitalis vary 300 to 400 percent in activity it is apparent that if properly conducted, digitalis and its allies can be satisfactorily assayed and standardized by either the "M. L. D. Guinea Pig or Frog Method," the "One-Hour Frog Method," or the "Cat Method."

In conclusion, your Committee would recommend that a copy of this report be forwarded to the chairman of the U. S. P. Revision Committee for consideration in connection with preparing the chapter on "Biologic Assays."

Your chairman would also recommend that, in view of the increase in the number of laboratories engaged in routine biologic assaying and the increased importance of this work, the membership of this Committee be increased from five to seven members.

Respectfully submitted,

PAUL S. PITTENGER, *Chairman.*

REPORT OF COMMITTEE ON U. S. PHARMACOPOEIA, AMERICAN PHARMACEUTICAL ASSOCIATION.*

BY L. F. KEBLER, CHAIRMAN.

Most of the members of this committee have made suggestions bearing on pharmacopoeial revision and feel that pending action by the Revision Committee they do not consider it desirable to discuss such matters publicly, which accounts for this brief report. The chairman believes, however, that attention might be directed to the advantage of a uniform general working temperature even though the U. S. Pharmacopoeial Convention adopted a recommendation of temperatures to be used by the Committee of Revision.

Those engaged in regulatory work, federal, state and municipal, as well as manufacturers are desirous of having written into the Pharmacopoeia the best available methods and up-to-date standards but what is wanted more are uniform methods of analysis so far as practicable. It is believed that a little thought and concession on the part of all concerned will make this possible. Simply because a certain temperature and routine has prevailed in a given industry for years ought not to stand in the way of yielding certain points for the common good. It may mean some inconvenience, confusion and money outlay, in the beginning for many, but in the end all will be benefited. At the 1921 meeting of the Association of Official Agricultural Chemists, some of these features were discussed and a committee appointed. In order to obtain the views of the association members the following questionnaire was sent out:

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* Presented at the Cleveland meeting of the American Pharmaceutical Association, 1922.

Uniform Temperature for Making Determinations and a Vote on U. S. P. vs. A. O. A. C. Alcohol Tables. Washington, D. C., July 17, 1922.

At the last meeting of the A. O. A. C., criticism was made of the A. O. A. C. and U. S. P. alcohol tables. The sentiment appeared to be in favor of the A. O. A. C. tables. The chairman of the committee to coöperate with the U. S. Pharmacopoeial Committee of Revision, appointed at the last meeting, has discussed the question considerably with the conviction that a conclusion is not so easily arrived at. The committee itself is divided; two are in favor of the A. O. A. C. alcohol tables and two in favor of the U. S. P. alcohol tables. The chairman has not yet been called upon to cast his vote but favors the 20°/4° tables from a purely scientific point of view, yet trade conditions play an important part and must be considered.

In view of the unsatisfactory outcome so far, the chairman is submitting the matter to the A. O. A. C. membership and subscribers to the JOURNAL, for discussion, criticism and a vote.

It is conceded that the most convenient temperature for making routine observations is the laboratory temperature, but this temperature varies considerably from time to time and in different sections of the country. A compromise temperature should be agreed on.

The A. O. A. C. tables are based on the Bureau of Standards table 20°/4° and represent true specific gravities, whereas the U. S. P. tables are based on the Bureau of Standards tables 15.56°/15.56°, and are apparent specific gravities, barometer at 760 mm. with 50% air saturation. The Bureau of Standards, so far as your chairman has been able to ascertain, has not committed itself to any temperature for alcohol tables or for determining specific gravities of alcoholic mixtures. The Standards' Bureau has adopted 20° as the temperature for standardizing apparatus. 20°/4° is considered the more scientific, but 15.56°/15.56° is more largely used in the industries and by industrial chemists and 60° F./60° F. is written into the Internal Revenue law dealing with alcohol products. The Gauger's Manual tables are also based on this temperature.

The question of a uniform temperature for alcohol tables is important in case of percent by volume, but percentage of alcohol by weight is independent of temperature. It is true that specific gravities of alcoholics may be made at any temperature desired but uniformity is highly desirable and the alcohol tables should be based on a uniform temperature.

The A. O. A. C. Methods of Analysis provide that specific gravities, whenever practicable, be determined on the basis of 20°/4° and that Refractive Indices and Optical Rotations be made at 20° whenever practicable. This certainly makes for uniformity.

The U. S. Interdepartmental Committee on Paint Specification Standardizations (consisting of representatives of the War, Navy, Agricultural, Interior, Post Office, Treasury and Commerce Departments, the Railroad Administration, the Panama Canal, and the War Service Committee of the Paint Manufacturer's Association of the United States) has adopted 15.5°/15.5° for linseed oil and oil of turpentine.

U. S. Pharmacopoeial Optical Rotations are to be made at 25°; Refractive Indices at 20°; and Specific Gravities, unless otherwise provided, at 25°/25°. See page LII of the present Pharmacopoeia.

Mr. F. M. Farmer, chairman of the Subcommittee on Specific Gravity of the American Society for Testing Materials, writes:

> "On the question of temperature there are so many standards already established in industry that it seems hopeless to get standardization on any one temperature. I am proposing therefore that our committee simply recommend that where there is no particular reason for adopting other values, the standard temperature of reference for the material be 25 deg. and for the water 4 deg."

In order that the committee may have your views, please answer the following questions, etc., and return in enclosed franked envelope.

1. Are you in favor of the A. O. A. C. alcohol tables? _____
2. Are you in favor of the U. S. P. 9th Revision, alcohol tables? _____
3. What single *Working Temperature* do you consider best for determining Specific Gravities, Optical Readings, Refractive Indices, Immersion Refractometer Readings, etc. _____

Suggestions and comments.

L. F. KEBLER, *Chairman A. O. A. C. Committee on Pharmacopoeial Revision.*
BUREAU OF CHEMISTRY, WASHINGTON, D. C.

About 1300 questionnaires were sent out. Number of replies received August 11—317.

RESULTS OF VOTE ON ALCOHOL TABLES TO DATE.

In favor of A. O. A. C. Tables	240	In favor of U. S. P. 9th Revision	33
Not in favor of	28	Not in favor of	154
Not voting	49	Not voting	130

RESULT OF VOTES ON BEST WORKING TEMPERATURE.

217 favor 20°
67 " 25°
13 " 15.5°
20 not voting.

The vast majority of those voting favor the A. O. A. C. Alcohol Tables, but this vote may not be representative and therefore no conclusion is drawn at present.

The vote on question No. 3 covering the best temperature for making determinations is very definitely in favor of 20°, nearly 3 to 1, as against all other temperatures.

The question that naturally suggests itself is who is represented by these votes? A partial list of representative voters selected at random answers this question best.

PARTIAL LIST OF VOTES ON BEST WORKING TEMPERATURE.

ALLYN, L. B., Analytical Laboratories, Westfield, Mass.	20°
AMERICAN SUGAR REFINING CO., New York.	20
AMERICAN TOBACCO CO., New York.	20
ANTOINE CHIRIS CO., New York, Essential Oils.	20
ARMOUR & CO., Chicago, Packers and Mfrs. of Foods & Drugs.	20
ASH, CHARLES S., San Francisco, Analytical Laboratory.	15.56
BARTLETT, J. M., Orono, Me., Exp. Station.	20
BROWNE, C. A., The New York Sugar Trade Lab., New York.	20
BUREAU OF CHEMISTRY, Washington, D. C.	20
BUREAU OF STANDARDS, Washington, D. C.	20
CALIFORNIA STATE BOARD OF HEALTH. Berkeley.	20
CAMPBELL CO., Joseph, Camden, N. J., Soup Mfrs.	25
DEPARTMENT OF HEALTH, Canada.	20
DOOLITTLE, R. E., Editor "A. O. A. C. Methods," Chicago.	20
GENERAL CHEMICAL CO., San Francisco Office, Chem. Mfrs.	20
GORTON PEW FISHERIES, Gloucester, Mass.	20
GREAT WESTERN SUGAR CO., Denver, Colo.	20
HEINZ, H. F. CO., Pittsburgh, Pickle Mfr.	20
HILTON, S. L., Druggist, Washington. D. C., Pres. Amer. Pharm. Assoc., 1922.	20
IOWA STATE DAIRY AND FOOD COMMISSION, Des Moines.	20
JOHNS, C. O., Standard Oil Co., New York.	20
LANGLEY & MICHAELS, San Francisco, Wholesale & Mfg. Druggists.	20
LEHN & FINK, New York, Wholesale and Mfg. Druggists.	20
LOOMIS, H. M., with Nat. Canners Assoc., Washington, D. C.	20
MASSACHUSETTS STATE BOARD OF HEALTH, Boston.	20
NATIONAL BISCUIT CO., Chicago.	20
PACIFIC AMER. FISHERIES LABORATORIES, South Bellingham, Washington.	15.5
PARKE, DAVIS & CO., Detroit, Mich., Pharmaceutical Mfrs.	25
POWERS, WEIGHTMAN & ROSENGARTEN, Philadelphia, Chem. Mfrs.	25
PROCTER & GAMBLE, Cincinnati, Soap Mfrs.	25
ROYSTER, F. S., Guano Co., Norfolk, Va., Fertilizer.	20
SEARS, ROEBUCK & CO., Chicago, Mail Order and Mfrs.	20
SHARP & DOHME, Baltimore, Pharmaceutical Mfrs.	20
SHERWIN WILLIAMS CO., Cleveland, Paint Mfrs.	20
SOLVAY PROCESS CO., Syracuse, N. Y., Heavy Chemical Mfrs.	20
SPRAGUE WARNER & CO., Chicago, Wholesale & Food Mfrs.	25
UNITED DRUG CO., Boston, Retailers and Drug Mfrs.	20
UNIVERSITY OF MONTREAL.	20
VEITCH, F. P., Pres. A. O. A. C.	20
WARNER, WM. R. & CO., New York, Drug Mfrs.	25
WOODMAN, A. G., Massachusetts Institute Technology, Boston.	20

The vote of the above gives practically the same ratio as the entire vote and is 3 to 1 in favor of 20 as against all other temperatures.

In order to secure a larger and possibly a more representative vote it is suggested that all readers of this article, interested in establishing a uniform temperature for making observations, etc., send their vote on the three questions asked to the chairman whose address is given above.

In order to give an idea as to the nature of the replies a few representative ones are given.

POWERS-WEIGHTMAN-ROSENGARTEN CO.
Manufacturing Chemists.

PHILADELPHIA, PA.
August 10, 1922.

PROF. L. F. KEBLER,
CHAIRMAN A. O. A. C. COMM. ON PHARMACOPOEIAL REVISION,
U. S. DEPT. OF AGRICULTURE, WASHINGTON, D. C.

DEAR SIR:

In reply to the questions contained in your circular letter of July 17th, 1922, entitled "Uniform Temperature for Making Determinations and a vote on U. S. P. *vs.* A. O. A. C. Alcohol Tables, we vote:

1. Are you in favor of the A. O. A. C. alcohol tables? No.
2. Are you in favor of the U. S. P. 9th Revision alcohol tables? Yes.

3. What single working temperature do you consider best for determining Specific Gravities, Optical Readings, Refractive Indices, Immersion Refractometer Readings, etc? 25° C.

Our reason for favoring the U. S. P. alcohol tables is because these tables are used in the industries as well as by the government. Specific gravity being only a relative constant the slight scientific advantage of the 20/4 standard is not sufficient to outweigh the practical advantage of the U. S. P. table.

Our preference for a single working temperature of 25° C. is because (1) we believe this temperature to be the average laboratory temperature in the United States, and (2) it is a well known general principle that it is mechanically easier and more economical to raise temperatures than to reduce.

Very truly yours,
POWERS, WEIGHTMAN-ROSENGARTEN CO.
Joseph Rosin, *Chief Chemist.*

LOGAN-JOHNSON, LTD.
Jams, Jellies, Crushed Fruit and Syrups,

201 STATE STREET,
BOSTON, August 8, 1922.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF CHEMISTRY,
WASHINGTON, D. C.

ATTENTION MR. L. F. KEBLER.

DEAR SIR:

In compliance with your recent request as to personal opinion about the A. O. A. C. and U. S. P. Alcohol Tables, I should like to cast my vote as follows:

(1) I am in favor of the U. S. P. 9th Revision, Alcohol Tables.

(2) I favor 20° as a working temperature for Optical Rotations and Refractive Indices and 15.6°/15.6° for Specific Gravities.

Yours very truly,
LOGAN-JOHNSON, LTD.
Samuel M. Pollack, *Chemist.*

F. S. ROYSTER GUANO COMPANY.

NORFOLK, VA., July 25, 1922.

DR. L. F. KEBLER,
WASHINGTON, D. C.

DEAR DR. KEBLER:

Your communication in regard to the temperature to be used in the alcoholic specific gravity tables and also in regard to temperature to be used in determining the specific gravity in other materials has been received. I have read what you have to say with much interest and am sorry that there is so much diversity of opinion in regard to the temperature basis for specific gravity. I have talked the matter over with my assistants in this laboratory and we all agree that the temperature of 20° would be decidedly preferable to a temperature of 15.56°. I would much prefer having the alcohol table based on a standard of 20°/4°. I think we should base our determinations on the true specific gravity and not on any thing else no matter if it may be more convenient at times. The temperature of 20° is certainly more convenient than the temperature of 15.56° and I hope very much the committee will adopt the present table of the Bureau of Standards.

I vote in favor of the present A. O. A. C. tables. I also vote for temperature of 20° for determining Specific Gravities, Optical Readings, Refractive Indices, Immersion Refractometer Readings, etc.

Yours very truly,
F. S. ROYSTER GUANO COMPANY,
A. W. Magnam, *Chief Chemist.*

University of Montreal. COPY
FACULTE DES SCIENCES

MONTREAL, Aug. 2, 1922.

MR. L. F. KEBLER,
WASHINGTON, D. C.

DEAR SIR:

I beg to acknowledge receipt of your circular concerning the adoption of a standard temperature for determining Specific Gravities, Optical Readings, Refractive Indices, Immersion Refractometer Readings; and wish to answer as follows:

1. Are you in favor of the A. O. A. C. alcohol tables? Yes.
2. Are you in favor of the U. S. P. 9th Revision, alcohol tables? No.
3. What single *Working Temperature* do you consider best for determining Specific Gravities, Optical Readings, Refractive Indices, Immersion Refractometer Readings, etc.? 20° C.

Suggestions and comments: Ten years' laboratory experience have convinced me that determinations at 15° C. are not practical; we have therefore had all our glassware stamped at 20° C. The temperature of our laboratory has never been lower than 19° and it is oftener at 22°. During the summer it is 25°. The result is, that when we wish to cool a picnometer at 15° drops of water settle on its sides and render weighing so difficult that, until the alcohol tables appeared, A. O. A. C. at 20°, we much preferred using the certified French alcoholometers. These alcoholometers, in fact, allow of specific gravities being made at the ambient temperature if used with the tables of correction prepared for that purpose. As this is the official French method, we have always considered that it is as accurate as the picnometer method at 15°/15°. In my opinion the greatest service that could

be rendered to chemists would be the establishing of two tables, one at 20° and one at 25°, with relation to the summer season (June to September), the chemist indicating in his report the table he has used. These might be completed by formulas which would allow us to refer determinations made at the ambient temperature to the nearest table.

Yours very truly,
GEORGES BARIL, M.D., F.C.T.C.,
Secretary of the Faculty of Pure Science.

COPY
THE GREAT WESTERN SUGAR COMPANY,
DENVER, COLORADO.

July 27, 1922.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF CHEMISTRY,
WASHINGTON, D. C.

ATTENTION L. F. KEBLER.

GENTLEMEN:

The enclosed inquiry regarding uniform temperature for alcohol determinations has come to us. While I am not a member of the A. O. A. C., I assume you may wish to obtain opinions outside of your membership and I have accordingly answered the questions in the enclosure.

One can hardly deny that there has been a tendency in recent years toward 20° C., as a standard temperature. In fact this has become the uniform basis for all sugar chemistry work. The single exception that I can recall is that we still sell molasses on the basis of Baume at 100° F. in accordance with trade practice. As between adopting a uniform temperature and following the varying standards of trade practice I prefer the former even if it is sometimes a monumental undertaking to change a trade practice.

Yours very truly,
(Signed) S. J. OSBORNE,
General Chemist.

COPY
DEPARTMENT OF COMMERCE,
BUREAU OF STANDARDS,
WASHINGTON.

July 28, 1922.

MR. L. F. KEBLER, CHAIRMAN,
A. O. A. C. COMMITTEE ON PHARMACOPOEIAL REVISION,
BUREAU OF CHEMISTRY,
WASHINGTON, D. C.

Subject: Alcohol Tables.

DEAR SIR:

1. Your request of July 17 for an expression of opinion on the question of alcohol tables and standard temperatures of determinations received.

2. The Bureau is of the opinion that the A. O. A. C. tables are preferable on account of the temperature basis on which the specific gravities are given. Twenty degrees centigrade is, in our opinion, a very satisfactory temperature for density work in general and we would recommend that temperature in reply to your last question.

Respectfully,
(Signed) S. W. STRATTON,
Director.

I have always felt that 20° C. is more nearly the average laboratory temperature the year around than either 15.56° or 25°—my experience for more than 20 years confirms it, and there will be less corrections to be made using 20° than at any other temperature. I therefore favor 20° C. as a working temperature.

Sincerely,
(Signed) S. L. Hilton.
Washington, D. C.

REPORT OF COMMITTEE ON NATIONAL LEGISLATION,* AMERICAN PHARMACEUTICAL ASSOCIATION.

Legislation the past year was confined largely to alcohol and narcotics although some few odds and ends showed their heads above the surface. Let me touch upon the latter first.

H. R. Resolution 229 introduced by Mr. Kahn sought to secure the absolute suppression of manufacture of opium, cocaine and their derivatives and preparations by securing an inter-

* This report was received and the report and resolutions were adopted. C. L. Eddy said that attention should be called to the growing tendency in the United States toward a bureaucratic form of government. Mr. Eddy referred to a law in New York state of this order which was abolished through the coöperative efforts of pharmacists and physicians. He also referred to a statement made recently in Congress—that "one in fifteen people is an employee of the Government; and these people who hold their jobs are making laws for our damnation."

national conference as an outgrowth of the Disarmament Conference. The latter adjourned without action upon the resolution and it is hence among the defeated bills.

H. R. 65 is an objectionable poison label bill—the kind that shows its head perennially when some Solomon from the high grass feels he has gained that little bit of learning that is admittedly so dangerous—fancy special colored labels and roughened special design bottle, etc. It went to sleep after being introduced and is still asleep.

H. R. 2193—The Jones-Miller bill to regulate the importation and exportation of narcotics. We objected to it but no hearings were granted and it was railroaded through Congress and has become a law. It will not affect the retail pharmacist to any extent.

H. R. 10738, to prohibit transportation of peyote or anhalonium and marihuana or cannabis indica from one state to another, and another bill on controlling the use of cannabis as a narcotic subject to regulations and record keeping have and are being opposed. They may become law. The latest information is that cannabis has been omitted from the bills.

Narcotics.—The work to be done in the narcotic line is to simplify the regulations of the Harrison Act so as to avoid the great amount of record keeping—by an adoption of a triplicate or quadruplicate narcotic blank; that a model state narcotic law be drawn, which should not be a tax law and should simplify the enforcement provisions; that unlawful possession be *prima facie* evidence of guilt; that the narcotic enforcement division be separated from prohibition division; that the retailer be allowed to sell not in excess of 100 average doses as defined by U. S. P. in dry, tablet or liquid form, as an extension of provisions allowing one ounce of solution to be sold on federal order blank; that codeine and apomorphine be exempted; that retailers be permitted to supply a tube of hypodermics without being classed as wholesalers. All the above have been put before the Narcotic Division of the Treasury Department for action as new regulations. The results, however, are far from satisfactory. In fact, instead of granting us any relief the purpose seems to be to make the regulations more rigid—going even so far as to keep records during process of manufacture or use in handling narcotics for preparing products containing them. The narcotic division like the alcohol division is a bureaucracy where unless united effort of the drug interests is brought into play we will have little redress and endless trouble. Medicines and alcohol are more and more being regarded as insidious or dangerous things to be closely controlled and regulated and not as necessary implements with which to combat disease.

A conference of the A. M. A. Committee on Narcotic Drug Control under Dr. Emerson in New York decided that a model narcotic law should not be a tax law; that it should control the distribution of narcotic drugs and should closely follow and in no way conflict with the provisions of the federal law. Its enforcement provisions should be simple and it must be an expression of the police power of the state; that unnecessary duplication of records under federal and state laws should be eliminated so that the state accept the records kept under the Harrison Act and that the state regulations should not conflict with the Harrison Act. It named a committee to draft such a model law with Dr. J. H. Beal as chairman.

If we hope to get relief from narcotic control which is expensive to the state and nation and accomplishes little if any good and makes handling of narcotics unremunerative and extremely annoying, and the same applies to alcohol and its preparations, we must do two things—consolidate our legislative efforts by consolidating our pharmaceutical associations and we must pass at this meeting a resolution stating our objections to the endless and needless regulations and record keeping requirements and send a copy of it to the Secretary of the Treasury and the Commissioner of Internal Revenue. I submit as part of this report at its close such a resolution.

Alcohol.—Our main problem in the past year was and is alcohol. It is unfortunate that the Volstead Act has made the purveyors of alcohol and alcoholic stimulants the drug trade of the country because there is so much in the way of abuse possible and so much in the way of regulation and control necessary, both troublesome and at times annoying to the pharmacist. Two features loom up large in alcohol legislation this year. The first is the effort to increase the federal alcohol tax from 2.20 to 6.40 per proof gallon. The tax was formerly 1.10 per proof gallon and was doubled to 2.20 per proof gallon as the result of the Volstead Act. The proposed increase was almost to sextuple the preprohibition tax. This would have necessitated the use of huge sums of money by the drug trade and would have compelled the borrowing of sums estimated at one hundred millions from banks in order to finance the payment of this terrific tax. Taxing a beverage which is a luxury is one thing but taxing a necessity is quite another thing. When

corn was selling at a normal price before 1912 alcohol cost about 20c a gallon to produce. The federal tax upon it then was about 2.10 per wine gallon (or 1.05 per proof gallon) which was about 1000% tax. When corn rose in price and alcohol cost about 30c per wine gallon to produce as it does now, then the above tax represented about a 700% tax. At the present rate of 2.20 per proof gallon or 4.20 per wine gallon the tax represents about a 1400% tax. If the 6.40 per proof gallon or 12.50 per wine gallon tax had carried the tax would have represented a tax of about 4000%. It seems unfair and unjust to load down a legitimate industry, using alcohol as a necessity and one of its most essential raw materials without which sickness could not be combatted successfully and humanity would suffer most by its absence, with a present 1400% tax. When one realizes that Messrs. Volstead and Wayne Wheeler tried to make this tax 4000% so as to pave the way for the total elimination of alcohol for any use, one appreciates that it is fanaticism and not reason that determines their actions. The extremists in prohibition aim and openly state as their aim the entire elimination of alcohol and the passage of laws preventing its manufacture and use. This irrational and extreme viewpoint is based upon ignorance or bullheadedness or both and is one of the things that is going to defeat prohibition ultimately. Alcohol is the only solvent available for extracting and preserving drugs and their products that is acceptable from every standpoint and will in all probability never be replaced for the preparation of drug preparations and the manufacture of chemicals. The world cannot do without medicines and medicines cannot be made without alcohol. It required a hard fight to prevent the increased alcohol tax from being passed but we succeeded by continuous and strenuous effort in convincing the more sensible and open-minded members of Congress that it was unwise legislation and we had to call in the banking interests to help us for it would have called for the use of very much money at a time when this was needed and there were enough frozen credits everywhere without adding "frozen" alcohol to the list. The next move came from interests who tried and are still trying to have so-called premedicated alcohol made legal for use in internal as well as external preparations. The reason is perfectly clear. If they can save the alcohol tax upon alcohol used in their preparations it will mean greatly increased profits for them and is feasible for them as they make only one or a few preparations and they can readily premedicate their alcohol. Premedication means denaturing the alcohol with the ingredient for which it is to be used in the finished product. For the pharmacist, however, this means elimination as a dispenser or compounder as well as user of alcohol in any form; for it requires five gallons as a minimum amount to be withdrawn and if a separate five gallons for every use is needed, he simply can neither afford nor can he find space to keep the needed stock of premedicated alcohol. It was at the December meeting of the National Drug Trade Conference that the scheme providing for premedicated alcohol came up in the form of resolutions to have the Conference endorse the plan of having this specially denatured alcohol, gilded by the name of premedicated alcohol, recognized as fit and desirable for internal as well as external use. The men that drafted the resolutions maintained that they had induced the solicitor of the Treasury Department to send an opinion to the Secretary of the Treasury stating that the Volstead Act could be interpreted to include the use of denatured alcohol for internal use as well as external use. Your Chairman as A. Ph. A. delegate to the National Drug Trade Conference took a determined stand against the resolution at the December meeting and said for the first time in the history of the Conference the interests represented distinctly and decidedly clashed. It was clear to see that such a use of tax-free alcohol meant millions of dollars net gain for proprietary manfacturers and your Chairman told them if they could put this through it would be a great success for their clients and credit for them; *but* such resolution would spell disaster for the retail pharmacist and as the Conference was instituted largely if not entirely for his benefit such resolution must not pass. Several other delegates supported your Chairman including Prof. Beal and Prof. E. F. Kelly and the resolution was defeated. The danger of the premedicated alcohol is passed for the time being although it threatened to develop into something from December until April. But now we have information that the Assistant Commissioner of Internal Revenue has decided that it is impracticable and undesirable. So alcohol for the present at least seems in *statu quo* although the paid agents of the Anti-Saloon League (now misnamed since saloons no longer exist and probably never will again) are eternally vigilant and active and will surely spring something new almost any time to disturb pharmacy.

Respectfully submitted,

(Signed) A. R. L. DOHME, *Chairman*, R. P. FISCHELIS,
A. G. DUMEZ, E. G. EBERLE.

RESOLUTIONS ON NARCOTICS AND ALCOHOL.

WHEREAS it is the unanimous opinion of the drug trade of this country that narcotic drugs and alcohol are essential and absolutely necessary parts of the legitimate drug business and probably the most important elements used in the successful combatting of disease, and

WHEREAS alcohol as a solvent to (1) extract the virtues of crude drugs, (2) preserve the thus extracted principles thereof, and (3) to manufacture chemicals used in medicine and when so used is only used in so far as its solvent and preservative qualities are concerned and employed, and

WHEREAS the attitude of the federal and state governments appears to be and apparently is to endeavor to attach to their use a series of regulations and keeping of records which make their use practically impossible and certainly extremely irksome and expensive, and

WHEREAS it is our experience that the narcotics actually obtained for illegitimate use and the alcoholic beverages and alcohol actually used illegitimately are not obtained by slipping through the records or the dealings of the drug trade or by the conniving of the same but by the theft and smuggling for narcotics and boot-legging for alcoholic products; all common law violations; and

WHEREAS these records appear to us from years of experience in recording and keeping same to be ineffective and without justifiable existence and furthermore cannot ever be expected to be and as a matter of fact practically never are accurate and correct; now therefore be it

Resolved by the American Pharmaceutical Association in annual meeting assembled that the Secretary of the Treasury and the Commissioner of Internal Revenue be requested to grant a hearing of the united drug interests of the country as represented by the National Drug Trade Conference some time during the month of October or November 1922 so that these interests may present to the said officials of the government their actual experiences and such recommendations bearing upon the handling and use of narcotic drugs and alcohol as they may prepare in form of a brief with arguments upon same at said hearing, and be it further

Resolved that should the government after due consideration deem it inadvisable to grant the drug trade the asked-for hearing, the drug trade hereby decide to take its case to Congress for the relief it seeks, and be it further

Resolved that copies of these resolutions be sent to the Secretary of the Treasury and the Commissioner of Internal Revenue and be given general publicity in the press of this country.

NARCOTIC RECORD RULING POSTPONED.

The following announcement has been made by the Internal Revenue Bureau:

Treasury Decision 3342, approved June 7, 1922, shall take effect January 1, 1923, instead of July 1, 1922, as stated in the last sentence thereof. The separate additional entries of all narcotic drugs in process of manufacture or repacking on July 1, 1922, will accordingly not be required in the return rendered for the month of July 1922, as stated in the second paragraph of article 84, Regulations 35, revised, as revised by said decision, but there must be reported on line of the summary, Form 810, of the return rendered for the month of January 1923, all narcotic drugs in process of manufacture or repacking on January 1, 1923.

Importers, manufacturers, producers and compounders who have arranged to comply with the provisions of T. D. 3342, as amended by T. D. 3372, approved July 19, 1922, beginning with the return for October 1922 may render their October and subsequent returns accordingly. In such cases it will not be necessary for them to show by a separate additional entry the quantities of narcotics in the process of manufacture or repacking on January 1, 1923.

T. D. 3372, approved July 19, 1922, is hereby revoked.

REPORT OF COMMITTEE ON DRUG MARKET.*

(*Concluded from p. 639, August number* JOURNAL A. PH. A.)

The following table shows the first report on weight of unit volumes of drugs made in the Analytical Department of the H. K. Mulford Company during the year of June 1, 1921, to June 1, 1922.

This method has been developed for drugs and spices by the Bureau of Chemistry, Washington, D. C., together with analytical data, and has been published in the *Journal Assoc. Off. Agr. Chem.*, 1920; 4, 149, 1921; 4, 409.

The value of this method in judging and selecting drugs will increase as additional reports and analytical data accumulate.

To lessen the individual factor difference in a determination of this kind, the same analyst has made all determinations. In several cases the commercial sample was too small to secure the unit volume. More than one sample was thoroughly mixed, and the weight of unit volume determined on the mixed samples.

Drug.	Volume, cc.	Weight, grams.	Average.	Remarks.
Asparagus seed	100	82.1	..	Laboratory sample.
Caraway	200	100.2	..	
Caraway	100	50.1	..	
Caraway	100	48.4	..	Includes more than one commercial sample.
Caraway	100	47.9	..	Laboratory sample.
Caraway	100	50.5	..	
Caraway	100	45.5	48.4	
Cardamom seed	500	334.4	..	
Cardamom seed	100	66.6	..	
Cardamom seed	100	66.1	..	
Cardamom seed	100	64.0	..	
Cardamom seed	100	68.0	..	
Cardamom seed	100	66.2	..	Laboratory sample.
Cardamom seed	100	69.8	..	
Cardamom seed	100	69.7	..	
Cardamom seed	100	69.2	..	
Cardamom seed	100	68.7	..	Includes more than one commercial sample.
Cardamom seed	100	65.4	67.37	
Cloves	200	78.6	..	
Cloves	200	77.3	77.9	
Cocculus indicus	500	192.6	..	500 cc appears to be a more correct volume for this drug.
Cocculus indicus	200	76.3	..	
Cocculus indicus	200	74.9	..	Laboratory sample.
Cocculus indicus	200	78.7	76.6	
Cochineal	100	41.2	..	
Colchicum seed	100	71.2	..	Assayed 0.69% colchicine.
Colchicum seed	100	73.1	..	
Colchicum seed	100	68.4	70.9	
Conium	100	53.2	..	Assayed 0.618 coniine.
Coriander	100	27.5	..	Laboratory sample.
Cubeb	500	156.6	..	
Cubeb	100	31.1	..	
Cubeb	100	29.3	..	Poor quality.
Cubeb	100	35.3	..	
Cubeb	100	30.3	..	
Cubeb	100	29.4	..	Poor quality. Includes more than one commercial sample.

* Pennsylvania Pharmaceutical Association, Buena Vista Springs, 1922.

Drug.	Volume, cc.	Weight, grams.	Average.	Remarks.
Cubeb	100	31.5	31.1	
Ergot	200	96.1	..	
Ergot	200	97.7	..	
Ergot	200	89.3	..	Laboratory sample.
Ergot	200	97.0	..	
Ergot	200	96.0	95.1	All samples were of good quality.
Ergot	200	94.5	..	Slightly dirty. Activity not equal to other samples.
Juniper berries	100	31.8	..	Laboratory sample.
Juniper berries	100	37.0	..	
Juniper berries	100	33.9	..	
Juniper berries	100	32.0	..	
Juniper berries	100	34.3	33.8	
Juniper berries	100	34.8	..	Includes more than one commercial sample.
Juniper berries	100	33.9	..	
Juniper berries	100	32.2	..	
Larkspur	100	44.8	..	
Larkspur	100	46.6	..	
Larkspur	100	46.2	..	Laboratory sample.
Larkspur	100	44.6	44.7	
Larkspur	100	42.4	..	Includes more than one commercial sample.
Larkspur	100	43.8	..	
Larkspur	100	45.1	..	
Rhamnus cathartica	100	42.4	..	Laboratory sample.
(ripe fruit)	100	44.0	..	
(ripe fruit)	100	43.4	43.2	
R. cathartica	100	51.0	..	Submitted for official drug.
(unripe fruit)	100	51.0	..	
(unripe fruit)	100	50.5	50.8	
Stavesacre	100	34.2	..	Laboratory sample.

Reported by G. A. SLOTHOWER.

The following table shows the results of physiologic assay of 24 crude drugs made in the Physiologic Testing Department of the H. K. Mulford Co. during the year June 1, 1921, to June 1, 1922.

Drug.	No. of samples.	Lowest assay.	Highest assay.	Aver.	Standard.	Number. Above.	Below.
Cannabis	3	120%	120%	120%	0.03 cc fl. ext. per kilo dog = ataxia	3	0
Digitalis	15	100%	250%	160%	M. L. D. = 1.0 cc tincture per 250 Gm. guinea pig	15	0
Ergot	6	78.3%	400%	240%	0.08 cc fl. ext. per kilo of dog = 30 mm. rise in blood pressure	5	1
Totals	24					23	1

Therefore, 95.8% of the crude drugs were above standard.

(Signed) *Committee* P. S. PITTENGER, GEO. E. ÉWE, JOS. W. E. HARRISSON, W. B. GOODYEAR, J. G. ROBERTS, *Chairman.*

EDITORIAL NOTES

Editor: E. G. EBERLE, Bourse Building, Philadelphia, Pa.

Committee on Publication: A. G. DUMEZ, *Chairman;* S. L. HILTON, IVOR GRIFFITH, R. A. LYMAN, W. L. SCOVILLE, and the Editor-in-Chief of the JOURNAL, General Secretary, Treasurer and Reporter on the Progress of Pharmacy, *ex-officio.*

Collaborators: JULIUS A. KOCH, President, A. Ph. A.; CHAS. H. LAWALL, President, A. C. P. F.; EDWARD WALSDORF, President, N. A. B. P.; E. FULLERTON COOK, Chairman, U. S. P. Revision Committee; S. L. HILTON, Chairman, Council A. Ph. A. The Chairmen of the Sections, A. Ph. A.: ARNO VIEHOEVER, CROSBY B. WASHBURNE, W. F. GIDLEY, WALTER M. CHASE, CLYDE L. EDDY; E. F. KELLY and WILLIAM B. DAY of the House of Delegates; A. G. DUMEZ, Secretary of the Council; the General Secretary, and the Reporter on the Progress of Pharmacy.

OMISSIONS IN THE LIST OF REGISTRANTS.

We regret that in making an alphabetical transcript from the register of those in attendance at the Cleveland Convention, the names of **Wortley F. Rudd,** Richmond, Va., and **Mortimer Bye,** Detroit, Mich., were inadvertently omitted. There may be other errors and, realizing the possibility of omission in making a transcript, we respectfully asked in the lines preceding the list to be advised—this request is again made.

AWARD OF THE FLÜCKIGER MEDAL BY THE SWISS APOTHECARIES' SOCIETY AT THE MEETING IN SCHAFFHAUSEN, SEPTEMBER 14–15.

We are in receipt of an announcement of the award of the Flückiger Medal to our fellow member, **Dr. Frederick B. Power.** The announcement states: "The Flückiger Medal has heretofore been awarded to an Englishman (Holmes), a German (E. Schmidt), a Frenchman (Heckel), a German resident of Switzerland (Hartwich), and to two Austrians (Vogl and Moeller). The Apothecaries' Society of Switzerland was delegated to make the award this year, and, by direction of the Trustees of the Flückiger Endowment to an American, Professor Dr. Frederick B. Power. A sketch of the medalist will be found in June JOUR. A. PH. A., p. 403.

OHIO STATE PHARMACEUTICAL ASSOCIATION THROUGH ITS COUNCIL PROTESTS AGAINST DELETION OF WINES FROM NATIONAL FORMULARY.

The Council of Ohio State Pharmaceutical Association protests against the deletion of wines and sherry wine from the National Formulary, and has addressed the Council of the American Pharmaceutical Association in reference thereto. The members state such deletion means in Ohio, on account of State Law Enactment, that a retail pharmacist will be unable to purchase, use or sell wnes or sherry wine.

The Rio de Janeiro Academy of Medicine has conferred the Sampaio prize this year on Pharmacist P. Seabra, for his work on an electric process for producing nitric acid.—*Science,* August 18, 1922, p. 190.

The importance of colloidal chemistry is constantly developing, and the studies reported in the A. Ph. A. Proceedings of the '70's by J. U. Lloyd are subjects of much greater importance to-day than when they were presented. Colloidal state of constituents of drugs may influence their activity, and their curative effect may be in a degree dependent on their promoting the colloidal state in the human body.

PERSONAL AND NEWS ITEMS.

Prof. H. G. Greenish, in an address before the British Pharmaceutical Society, urged the necessity of establishing an experiment station for medicinal plant research. He stated that a particularly important subject for investigation was the part played by alkaloids in the metabolism of the plant, and he pleaded for investigations of the influences which are concerned in increasing the amount of active principles in plants.

Dr. Charles L. Parsons returned from Europe in time to attend the meeting of the American Chemical Society in Pittsburgh. He states that European scientists are watching American research work with great interest.

Vernon Kellogg, of the National Research Council, contends that we have not been very successful in popularizing science. "The French book shops," he says, "are filled with charmingly written popular science books whose authors are the most eminent of French scientific men."

Ex-President Caswell A. Mayo spent a few weeks following the Cleveland A. Ph. A. convention in northern Ontario, canoeing and fishing. He returned benefited in health and with a supply of tales relating to his experiences as a fisherman.

Frank R. Eldred, writing on "Pharmaceutical Chemistry" in the September *Journal of Industrial and Engineering Chemistry,* points out that if we had some adequate means "for coördinating the work of the army of clinicians, pharmacologists, biologists, and chemists upon whose researches the health and happiness of the human race are so largely dependent, the rate of progress would be increased many fold. Any lack of coördination and coöperation in the attack upon disease constitutes a tragedy many times reënacted."

Ralph C. Jennings has succeeded the late T. R. L. Loud as vice-president and sales manager of the New York Quinine and Chemical Works. Mr. Jennings joined the American Pharmaceutical Association in 1915.

J. Leon Lascoff has returned from a vacation automobile trip with Mrs. Lascoff. They visited various points of interest in New England and as far north as Maine.

Robert S. Lehman, secretary of the Section on Historical Pharmacy, accompanied by Mrs. Lehman, visited in Colorado, after attending the Cleveland convention.

The Virginia Pharmacist, in expressing hopes that Virginia will be a leader in the movement for making the plan of organization adopted at the Cleveland A. Ph. A. meeting effective, brings this important matter to the attention of the readers in an editorial of its September number, from which the following paragraph is quoted:

"We ask that you read and study the plan when it appears. We believe that it is a step in the right direction, but cannot succeed unless a large number of men throughout the country get behind it with intelligent knowledge of what it means, and with an abundance of enthusiasm for its success."

H. M. Whelpley and **Francis Hemm** recently addressed the Missouri Conference Catholic Hospital Association, on the subject, "The American Pharmaceutical Association." The interest of hospital pharmacists everywhere should be enlisted for the Association.

The Squibb Message for September, in addition to much interesting matter, has a number of pictures of the late Dr. E. R. Squibb, whose activities are part of the records of the American Pharmaceutical Association.

The Pharmaceutical Era is now being issued as the *Drug Trade Weekly;* besides carrying the matter of the former it also has a Prices Current. Beginning January 1923, the combined publications will be issued weekly, as *The Pharmaceutical Era.*

Dr. Arno Viehoever, secretary of the Scientific Section A. Ph. A., sailed for Europe September 30. He will visit England, Holland, Germany, France and Switzerland and other countries, and return before the end of the year.

Edward Walsdorf, president of the National Association of Boards of Pharmacy, was entertained by the pharmacists and friends at New Orleans and vicinity, expressive of their appreciation of the honor conferred by his election.

Prof. A. L. Herrera, editor and publisher of "Pharmacopoeia Latino-Americana," distinguished biologist of Mexico, is visiting biological institutions in this country. He is a member of the Pharmaceutical Faculty of Mexico and Honorary President of the Pharmaceutical Association of Mexico. The *Scientific Monthly* for October carries a full-page picture of him.

Dr. John F. Hancock, chairman of the William Procter, Jr., Memorial Fund, quietly celebrated his eighty-seventh birthday at his home, Saturday, September 10. The event was the occasion for a family gathering. A large number of messages of congratulation and other expressions of affection and esteem were received in the course of the day. He is the veteran among the A. Ph. A. ex-presidents. Next year it will be 50 years since his election in Richmond, in 1873.

Rt. Rev. William P. Remington is now Missionary Bishop of Eastern Oregon; since 1913 he has been Suffragan Bishop of South Dakota, and is the youngest member of the House of Bishops. He is a son of the late Prof. Joseph P. Remington.

H. Hoshi, pharmacist of Tokio, Japan, is in this country at present. The business of which he is president was founded by him with 400 yen of borrowed capital—approximately $200; the Hoshi Pharmaceutical Com-

pany is now said to be a 20,000,000 concern. He plans to establish chain stores in the Orient. He drills his employees in a Creed of Kindness—"Be kind to yourself. Be kind to everybody. Be kind to your work. Be kind to the materials you use or handle. Be kind to time. Be kind to money. Kindness is peace, prosperity, progress. Kindness knows no enemy. Kindness conquers the world."

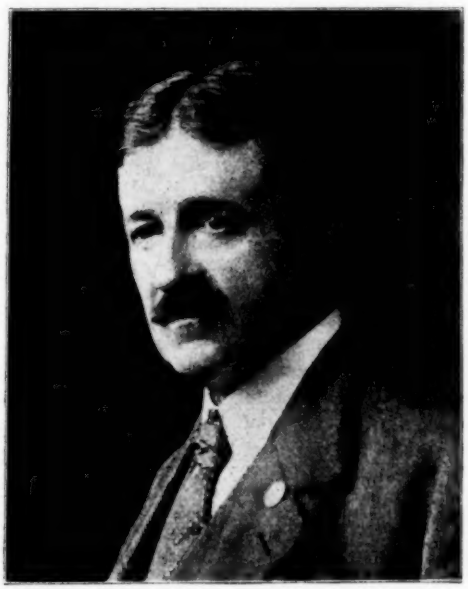
Ferrein, said to have been the largest and finest pharmacy in the world (Moscow), has been absorbed in the general association of pharmaceutical laboratories and establishments which is controlled by the Russian Ministry of Health. The former owners are represented in this pharmacy.

The *Baltimore News* of September 9 devoted several columns to the Pharmacy of Hynson, Westcott and Dunning. The occasion which prompted this extended historical sketch was the removal to the new building recently completed by the firm. The article speaks of the development of the business, and of those who participated in making it a success—the late Prof. H. P. Hynson and our fellow-members, J. W. Westcott and Dr. H. A. B. Dunning.

OBITUARY.

CHARLES MANGAN FORD.

Charles M. Ford* died at the home of his daughter in Pueblo, Colo., August 30th; his body was brought to Denver where funeral services were conducted at the Cathedral



C. M. FORD.

and burial was made at Crown Hill Cemetery.

Because of failing health, he disposed of his business in Denver in 1913, and established his home in Cambridge, Mass., and for several years was in the employ of E. R. Squibb & Sons, for which firm he did detail work among the physicians in the New England states.

Later he found it necessary to spend the more rigorous months of the winters in Florida. He removed to Los Angeles about two years later where he has since made his home. Mr. Ford was born January 5, 1853, the son of Michael and Jane (Mangan) Ford. He received his early education in Chicago where he also attended the Chicago College of Pharmacy, and graduated from the latter institution in 1874. After graduation he was employed in the pharmacy of Buck & Rayner until 1879, when he located in Denver.

Mr. Ford was a charter member and the first president of the Colorado Pharmaceutical Association, in which capacity he served for two years, and to which he was called again in 1907. He was largely instrumental in securing the passage of Colorado's first pharmacy law in 1887, and was a member of the first Board of Pharmacy appointed and served until 1895; he was secretary from 1887–1889 and president from 1893–1895.

He was an influential member of the Denver Pharmaceutical Association and of the Denver Branch of the American Pharmaceutical Association as long as he remained in Denver, serving terms as president of both organizations. He was dean of the Pharmacy Department, University of Denver, and professor of pharmacy from 1889–1895; editor of the *Rocky Mountain Druggist* from 1888 to 1900.

Mr. Ford joined the American Pharmaceutical Association in 1887. He was local secretary in 1912, one of the three candidates

* We are indebted for these data to Prof. Wm. B. Day.

for president in 1910, and elected vice-president in 1894 and again in 1912.

The deceased is survived by Mrs. Ford (nee Miss. Nell Smith), two daughters and a son, Robert; a son, Charles S., died Sept. 24, 1918, at the age of twenty-eight years.

Tobias J. Widrig, fifty-nine years old, died on September 14 at his home in Ft. Thomas, Ky., after an illness of a year. He was a son of the late T. A. Widrig, of Newport, Ky., and was in the drug business for years at Sixth and Washington Avenues, that city. He is survived by his widow, four sisters and two brothers, Louis C. Widrig, treasurer of the Cincinnati Baseball Club, and Edward C. Widrig, both of whom conduct pharmacies in Newport. The deceased joined the American Pharmaceutical Association in 1915.

SOCIETIES AND COLLEGES.

SUBSCRIPTIONS TO AMERICAN PHARMACEUTICAL ASSOCIATION HEADQUARTERS BUILDING FUND.

No.		
	Previously reported	$5,176.90
129.	A. B. Stevens, Escondido, California (Paid)	10.00
130.	Frank X. Moerk, Philadelphia, Pa.	20.00
131.	E. V. Zoeller, Tarboro, N. C.	20.00
132.	Charles H. LaWall, Philadelphia, Pa.	100.00
133.	Philip J. Kolb, Chicago, Ill.	10.00
134.	Geo. C. Diekman, New York, N. Y. (Paid $10)	50.00
135.	W. Hull Wickham, New York, N. Y. (Paid)	100.00
136.	James A. Black, Baltimore, Md. (Paid)	10.00
137.	W. H. Zeigler, Charleston, S. C.	25.00
138.	W. P. Porterfield, Fargo, N. D.	100.00
139.	Ivor Griffith, Philadelphia, Pa.	25.00
140.	Irwin A. Becker, Chicago, Ill.	10.00
141.	Charles E. Caspari, St. Louis, Mo.	100.00
142.	Jacob Diner, New York, N. Y.	50.00
143.	H. Engelhardt, Baltimore, Md.	25.00
144.	Robert P. Fischelis, Newark, N. J.	25.00
145.	William A. Frost, St. Paul, Minn.	50.00
146.	Jeannot Hostmann, Hoboken, N. J.	25.00
147.	Ezra J. Kennedy, Rutherford, N. J.	20.00
148.	Julius A. Koch, Pittsburgh, Pa.	100.00
149.	Cleveland Branch of the A. Ph. A., Cleveland, Ohio, by Eugene R. Selzer, Chairman, (Paid)	500.00
150.	Arno Viehoever, Washington, D. C.	25.00
151.	Theo. D. Wetterstroem, Columbus, Ohio	25.00
152.	Robert S. Lehman, New York, N. Y.	10.00
153.	Walter Rothwell, Hatboro, Pa.	100.00
154.	Alan W. Saul, Norfolk, Va.	5.00
155.	Hugo H. Schaefer, New York, N. Y.	25.00
		$6,741.90

THE NATIONAL ASSOCIATION OF RETAIL DRUGGISTS.

The twenty-fourth annual convention of the National Association of Retail Druggists was the largest in its history.

Prof. E. F. Kelly was present as one of the representatives of the American Pharmaceutical Association, and Dr. J. H. Beal delivered an address on "The Law and the Innocent Bystander." The former brought the greetings of the A. Ph. A., and outlined the plan of coördinating the state and national associations for better service of American pharmacy. Dr. Beal stated in his address that the present tendency is toward centralized government; he said, "if we go on for ten years more in the direction we are now headed, one out of every ten citizens will be a federal employee, supported by the other nine."

President Ambrose Hunsberger handled the subjects of his address tersely and pointedly and in language that voiced his position and, being supported by the Association, that of the Association. Several extracts from his address follow. Relative to narcotic regulations he said, in part: "The Government is using a lot of misdirected energy and issuing an endless stream of regulations applying to pharmacists, while illicit distributors are allowed to run wild. This energy might better be applied to shutting off the supply at its source."

Touching on prohibition, he said: "If the druggists, as the involuntary victims of legislative circumstances, become the sole and reluctant distributors of spirituous products and are to be held strictly responsible for the proper distribution of alcoholic supplies and for the genuineness of official order forms, then fairness demands that they should be provided with the proper facilities. The outstanding requirements relating to this duty involve, first, the issuance of a counterfeit-proof liquor-prescription form; second, the provision of safeguards that will preclude the procurement of these forms by unauthorized persons; third, the immediate apprehension of persons who essay to gain possession of alcoholic liquors by fraudulent means; fourth, the promulgation of regulations that are based on the intent of the law and that are adaptable to routine drug store procedure; fifth, the uniform interpretation of the language of the regulations as well as the consistent application of the provisions; sixth, the exemption from the classification as preparations fit for beverage purposes of most of the U. S. P. and N. F. compounds which are now so classified; and finally, the recognition of the fact that retail pharmacists as a class rank high in the lists of law-abiding citizens."

A resolution was adopted requesting the Internal Revenue Commissioner to grant liquor permits only to registered pharmacists who have been in business for a year, and protesting against the issuance of prohibition mimeographs and circulars, and urged that the law be administered only through treasury decisions.

Another resolution indorsed the Volk resolution and urged that no immediate action be taken on a model narcotic law. Still another resolution disapproved of the King bill amending the food and drugs law; another protested against the present administration of liquor and narcotic laws as placing hardships upon legitimate dealers, while failing to curtail the illicit traffic.

The election of officers resulted in the choice of the following: *President*, Curtis P. Gladding, Hartford, Conn.; *Vice-Presidents*, W. Bruce Philip, San Francisco, Cal., Al Falkenhainer, Algona, Iowa, Gerald Przybylski, Detroit, Mich.; *Members of Executive Committee*, Ambrose Hunsberger, Philadelphia; J. H. Riemenschneider, Chicago, Ill.

ASSIST THE RED CROSS IN MAINTAINING ITS MEMBERSHIP.

All that is necessary to secure the assistance of druggists in the cause of the American Red Cross is to direct attention to the opportunity.

The Annual Roll Call of the American Red Cross, in which its membership is renewed from year to year, will take place in the period between Armistice Day, November 11th, and Thanksgiving Day. This is the only appeal that the National Organization makes during the year; and is for the purpose of maintaining its membership at such a point as will enable it to perform those duties which are placed upon it by Congress.

For purposes of the 1922 Roll Call three posters have been prepared. One of these, "At the Service of All Mankind," is by Lawrence Wilbur, and another by Franklin Booth, the latter being a sketch of the Capitol on which is superimposed the Red Cross. The third poster, "The Planters," is for use in the Jûnior Red Cross Roll Call, and is by Anna Milo Upjohn, the well-known painter of child subjects.

BOOK NOTICES AND REVIEWS.

The following reviews have been prepared and contributed by Otto Raubenheimer, Ph.M.

A Half-Century of Public Health. Jubilee Historical Volume of the American Public Health Association. Edited by Mazyck P. Ravenel, M.D. 461 pp. $3.75. American Public Health Association, New York City.

The volume before us is published in commemoration of the fiftieth anniversary celebration of the foundation of the American Public Health Association in New York City, November 14 to 18, 1921. It is justly dedicated to Stephen Smith, M.D., LL.D., noted surgeon, pioneer sanitarian, eminent citizen, founder and first president of the American Public Health Association, and to all those who have aided the Association toward the attainment of its ideals. Dr. Stephen Smith, a farmer's boy in Onondaga County, N. Y., was born in 1823 and was still living and an attendant and an attraction at the 50th anniversary celebration. His picture adorns the front page of the

volume, which presents a real history of Public Health in the United States and Canada.

The book contains many chapters, all written by experts, from which we will mention the following: "History of Bacteriology," by Frederick P Gorham, M.A.; "Fifty Years of Water Purification," by George C. Whipple, C.E.; "Progress in Federal Food Control," by Carl L. Alsberg, M.A., M.D.; "Milk and Its Relation to Public Health," by Charles E. North, M.D.; "A Fifty Year Sketch History of Medical Entomology," by L. O. Howard, Ph.D., M.D., LL.D; and "History of Public Nursing," by Lavinia L. Dock, R.N.

In no field have more remarkable advances been achieved than in medicine, both curative and preventive. Both have been revolutionized; knowledge has replaced guess-work; experiment has superseded empiricism and superstition; medicine has become a science rather than an art—all through the brilliant researches begun by Pasteur, and carried on by Koch and a host of earnest workers who followed in their footsteps.

The American Public Health Association and its president and editor are to be complimented upon the publication of this volume, which is not only of interest to physicians but also to chemists and pharmacists.

The German publishing firm Gustav Fischer in Jena, well known in pharmaceutical and medical circles, sent us the two following works for review:

Lehrbuch der Botanik für Hochschulen von Edward Strassburger, Fritz Noll, Heinr. Schenck and A. F. W. Schimper. 15. umgearb. Auflage, bearbeitet von Dr. Hans Fittig, Dr. Ludwig Jost, Dr. Heinrich Schenck and Dr. George Karsten. Lex. 701 pp.

As assistants in the department of botany in the University of Bonn the original four authors in 1894 prepared this textbook as an urgent need for pharmaceutical and medical students. That 15 editions have been published during 27 years proves the success of the so-called "Vier Männer Buch" (4 men's book)! Only one of the original four authors survives, *i. e.*, Dr. Heinrich Schenck, Professor at the Technical High School in Darmstadt.

The following short outline of the contents will serve as an illustration of the vast material covered and the excellent way in which same is treated.

I. General Botany: 1. Morphology consisting of Zytology, Histology, Organography and Theory of Evolution. 2. Physiology containing Metabolism, Development and Locomotion.

II. Special Botany: 1. Thallophyta, Bryophyta and Pteridophyta with subdivisions. 2. Spermatophyta containing Origin, Morphology, Oekology and Development of the seed plants, their classification into Gymnospermae and Angiospermae with subdivisions. Further advantages of the work are a bibliography of 16 pages and a systematic table, of four double column pages, containing the official plants and an index comprising 29 pages divided into three columns. The book contains 849 illustrations and the principal plants are produced in natural colors, which are works of art. It is a pleasure to see them in a book on botany intended for pharmacists. The colored illustrations of Digitalis Purpurea of one-half its natural size, on p. 613, and many others of the official plants should be well studied and are as good as the natural plants.

The "Vier Männer Buch" is one of the master works on botany. It is well suited to make this somewhat dry subject highly interesting and instil into the student and pharmacist the much-needed love for botany and the entire vegetable kingdom which used to be one of the first needs in the pharmacist of old.

The work should be better known on this side of the "great pond," especially among teachers who master the German language. We wish the 15th edition the success which it fully deserves.

Hämatologische Technik von Prof. Dr. Herm. Schridde und Prof. Dr. Otto Naegeli. 2. umgearb Auflage. 28 Abbildungen and 3 Platten. Lex. 150 pp. Prof. Dr. Schridde, Director of the Pathological Institute in Dortmund, presents in 66 pages including 6 illustrations and 2 colored plates (works of art), the technique of the histological methods for the examination of blood and the organs secreting same. Part II of the book is by Prof. Dr. Otto Naegeli, director of the medical clinic at the University of Zürich, who presents the technique of clinic blood analysis in 80 pages with 22 illustrations and one colored plate.

Both authors are well-known authorities in this field and for that reason the book is such that we can cheerfully recommend it to all who do work along this line. Clinical examinations rightly belong to the domain of the scientific pharmacist, who can carry out this work with honesty and conscientiousness to the benefit of physician, patient and himself.